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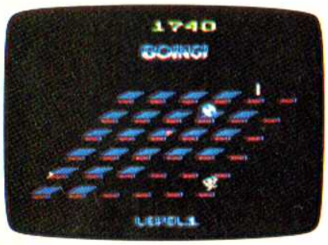

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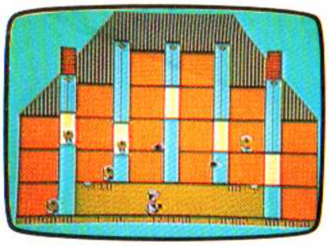

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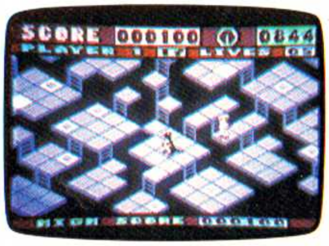

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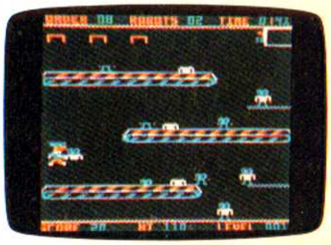

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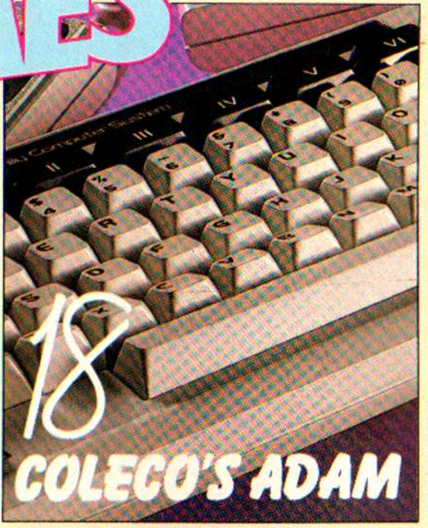

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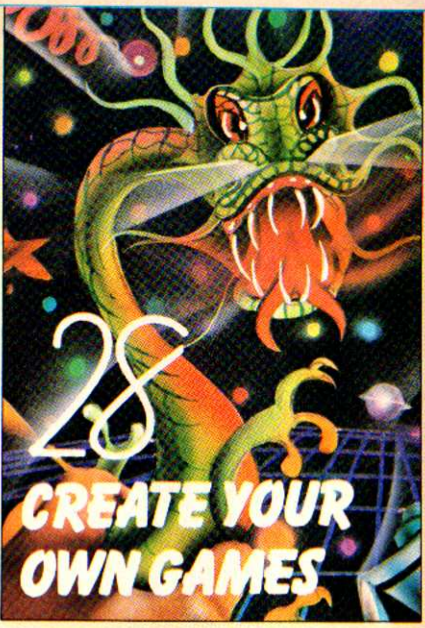

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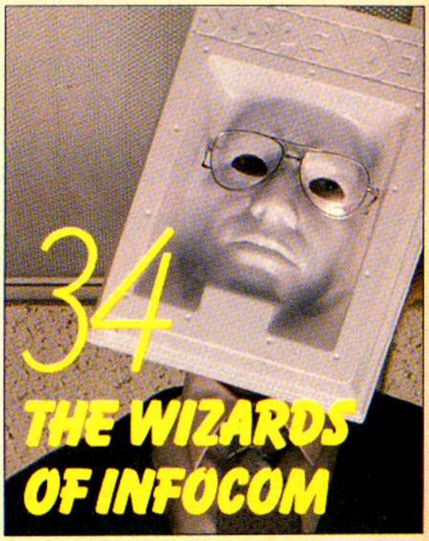

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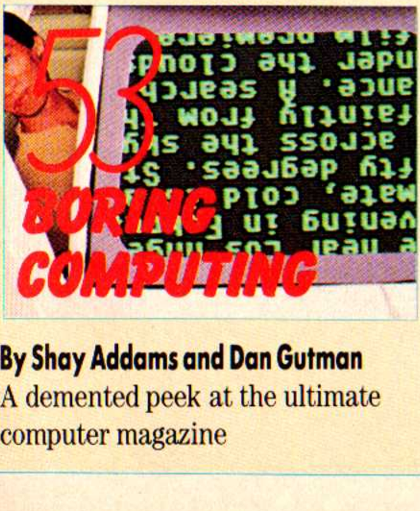

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SWAP SHOP

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LETTERS TO THE EDITOR

WHY HIGH-RES?

What does "high-res" graphics mean? Can't a company just say high-res on the label of a game box, or what?

A. Sirrocco

The resolution of a computer's display is based on the number of pixels—little dots of light—generated. More pixels means sharper detail, and that's what high-res is all about. A computer will have several graphics modes, one for high-res, another for medium, etc. The game manufacturer can only advertise a product as "high-res" if the program utilizes that graphics mode.

MORE SCORES

I'd like to know the official updated high scores for these games: *Donkey Kong*, *Wild Western* and *Donkey Kong Jr.* Did you know that you can jump the big oil can on the conveyor belt level in *Donkey Kong*? How do I become *famous* playing arcade games, or get a job with a software company? I've got some good ideas but don't know where to go from here.

Dwayne Shartzer

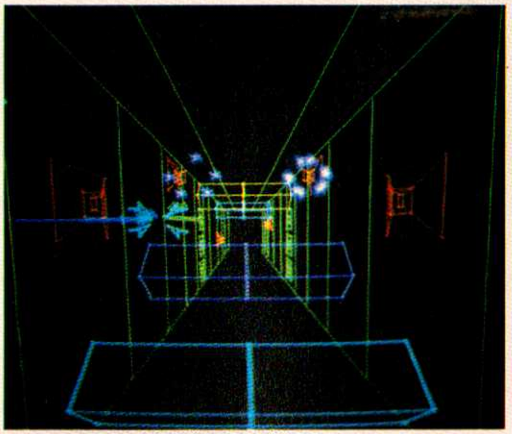
According to the Twin Galaxies International Scoreboard in Ottumwa, Iowa: Donkey Kong—874,300; Donkey Kong Jr.—957,300; Wild Western—803,900. *For arcade fame, try investing a lot of quarters.*

VECTOR GRAPHICS

I hear a lot about vector games like Star Wars *and* Tempest, *but I don't really understand how they are different from regular arcade games.*

Bill Simon

"Regular" games are raster games, in which color guns scan back and forth across the screen, painting hundreds of tiny dots. Vector games don't scan, they draw sharply etched lines from one point to another. This is why games like Star Wars *appear sharper, starker and more linear.*



Superb vector graphics made* Star Wars *a big hit.

SECRET KANGAROO GAME

My question's about *Kangaroo*. If you reset the game, then turn your Atari off and on quickly before the theme music is over, Mama Kangaroo starts off at the top of the screen, unlike normally. Also, the monkeys and apples they throw are invisible and the theme music is different. Is this a bug in the program, or an intentional "secret game"?

Michael Mayhew

FEAR OF FLYING

Will the metal detectors and x-ray machines at the airport wipe out my computer disks or game cartridges?

D.B. Cooper

We called Scott Adams of Adventure International, who said he travels constantly with magnetic media like disks and carts and has never had any problems. Still, many airports use different types of equipment, and the sensitivity of a unit at one may be turned up higher than others. So for 100% security, it's best to get the guards to pass it through.

ATARI GAMES FOR COLECO?

I just got a ColecoVision and want to know if Atari is going to make cartridges for the Coleco console.

Bryan Flemming

Atari's planning to make games for many home computers other than their own, under the name "Atarisoft." ColecoVision and Adam will be included. That means ColeoVision owners will soon be able to play Pac-Man, Missile Command, Defender, *etc.*

WHERE'S MY DRAGON?

In your *Hotline* section, you mentioned Coleco's laserdisc games. When will they come out with *Dragon's Lair* and how much will it cost? Also, will Coleco be making an adapter for Atari 5200 cartridges?

Sean Shidell

The home version of Dragon's Lair *is at least a year away, and there's no price in sight. It looks unlikely that Coleco will make such an adapter for 5200 games. (They've killed the Intellivision game adapter, too.)*

THE "GRADUATE" DROPS OUT

If it hadn't been for your article on the computer module for the Atari VCS, I'd have sold mine by now. I was going to sell it and get a computer. Thanks.

Rob Rysiew

Maybe you'll want to reconsider. Unitronics has scrapped their "Expander" and Atari will not be making their "Graduate" plug-in, either. You can still buy Spectravideo's "CompuMate."

ROLLING YOUR OWN

What's the story on computer games that say you can create your own scenario or version of the game? Do you have to know programming?

Bruce Shelton

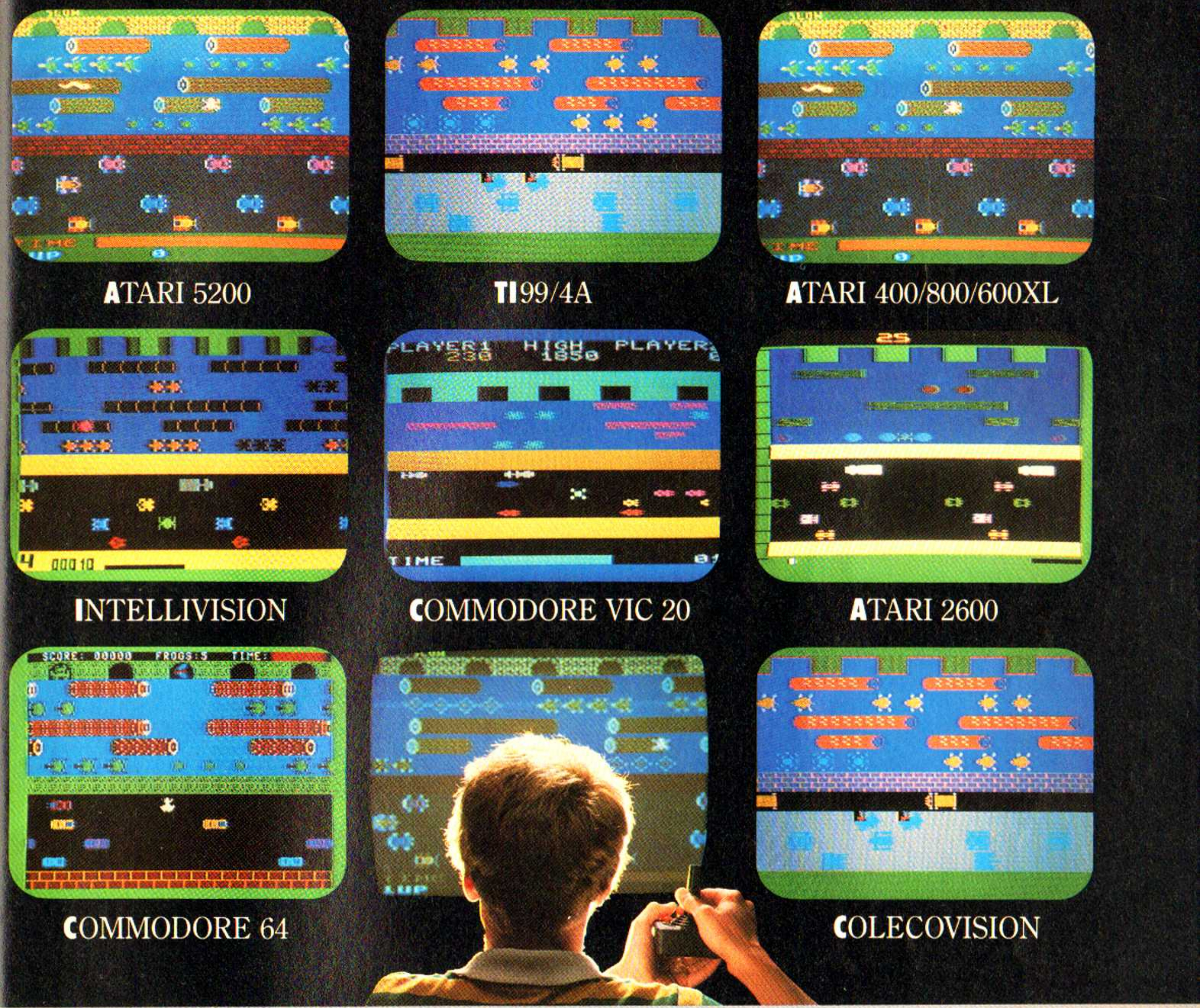
No programming know-how is required. Check out this issue's feature article on "create your own version" games.

OOPS!

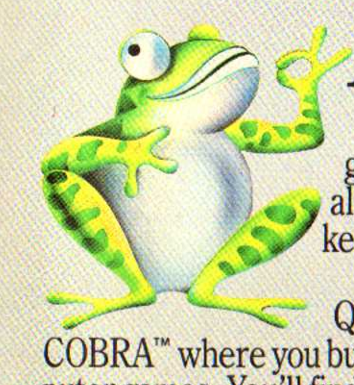
We sincerely apologize for a printing error on page 17 of our last issue. The colors of the First Star Software ad are incorrect. As you can see on page three of this issue, the four game screens are exceptionally vibrant. In fact, we've already given *Flip & Flop* and *Bristles* A ratings. Once again, we apologize for the mistake.

The editors

Got a question? Got a gripe? Just want half a million people to see your name in print? Punch your initials in here, partner, and write: Letters to the Editor, Computer Games, 888 7th Ave., New York, NY 10106.


ATARI 5200
TI 99/4A
ATARI 400/800/600XL
INTELLIVISION
COMMODORE VIC 20
ATARI 2600
COMMODORE 64
COLECOVISION

8 WAYS YOU CAN PLAY FROGGER*™ AT YOUR PAD.



FROGGER is one of the all-time great award-winning home video games. And now Parker Brothers has programmed it into all the most popular video and computer formats so you can keep things hopping in your own home.

Catch Frogger along with POPEYE,® Q*bert,™ TUTANKHAM™ and SUPER COBRA™ where you buy your video and computer games. You'll find it absolutely ribbitting. ®PARKER BROTHERS

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ARCADE ACTION
FROGGER
POPEYE

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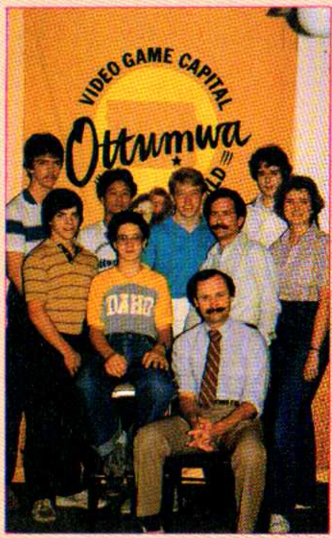
FIRST NEWS WAVE

HOT GOSSIP

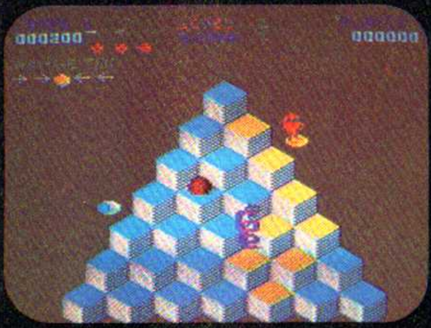


Twin Galaxies' Walter Day is building a team to face Japan in the World Championship of Video Games. *Wargames* was a hit, *Joystick* a bomb. The moral? Don't name a movie after a peripheral.

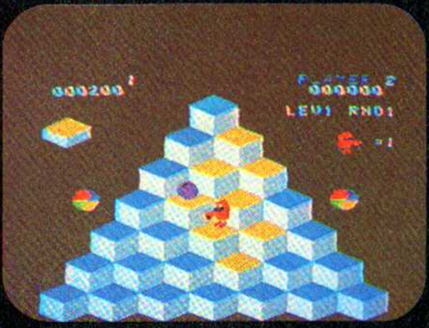
RKO WARNER TWIN
WARGAMES
TWILIGHT ZONE THE MOVIE

Cinerama 1 theatre
JOY STICKS
Dobbs HATS

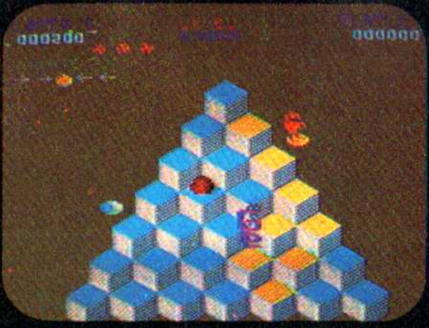
It's been decided—**Atari** will begin making game cartridges for **ColecoVision** and **Adam** . . . The **Yankee Group** estimates that **20%** of the projected **22 million** "personal computer homes" in 1985 will have **modems** . . . Atari has licensed the arcade hit **Sinistar** for home video and computer games . . . Yikes! We just saw **Intellivision** on sale in New York for **$9.95** . . . Video game guru **Walter Day** is now chairman of **VIDION,** the International Association of Video Games Players. The address is 1440 N Street N.W. Suite 601, Washington, D.C. 20005 . . . **Thorn EMI** to release **Computer War,** a game based on the hit movie **Wargames.** We don't see anybody making a game of the bomb of the year, **Joysticks** . . . Now you can get an **Apple Credit Card** to buy equipment for 10% down and low monthly installments . . . **Taiwan,** one of the world's biggest manufacturers of video game components, has banned all arcades in that country. Amazingly, the government has offered to buy the machines and put them in **old age homes!** . . . **Creative Software** is coming out with **In The Chips,** a game where you have to run your own software company . . . **Dan Gorlin,** the guy who designed the megahit **Choplifter,** programmed the game on a computer he borrowed from his **grandfather** . . . **Paul McCartney** is rumored to be at work on a film, **Give My Regards To Broad Street,** that is also to be a video game. **Ringo Starr** and **George Harrison** are also in the film, which is due out next summer . . . Atari has started an **artificial intelligence** department . . . The logo of **our magazine,** by the way, was designed by **Sam Konowitz,** the same guy who designed the logo for **Star Wars** . . . If you can't get through to that **other** hotline, don't fret. It's a commercial for **Parker Brothers,** who, incidentally, are busily at work on a home version of **Mad Planets.** They are also "looking into laserdiscs" and have put good old **James Bond** on the back burner again. Will that game **ever** get out? . . . **Jungle Hunt** was not the first arcade game with that title. In 1973, **Gottlieb** had a Jungle Hunt **pinball** game . . . Notice that if you're the high scorer on **Crystal Castles,** your initials actually become a part of the castle on the first screen . . . We're waiting for the sequel to **Legionnaire**—Legionnaire's Disease . . . All the laserdisc players for **Dragon's Lair** were made by **Pioneer** . . . **Taito** is about to release their first laserdisc game, and we can expect all the other coin-op manufacturers to follow . . . Defunct **Data Age's Ray Dettling** is now working for **Fox Video Games** . . . **Sega's** U.S. manufacturing center has been sold from **Gulf and Western to Bally**, who just received a check for **$600,000** in royalties from the **Fleer Corporation** for sales of **Pac-Man** bubble gum, candy, stickers and lollipops . . . Want to get a newsletter all about **Personal Robotics?** Write to P.O. Box 10058, Berkeley, CA 94709 . . . It looks like even **Odyssey** is abandoning the Odyssey^2. Their new line of games for **ColecoVision** and four other formats will go by the name **Probe 2000.** The first release will be **War Room,** yet another game inspired by **Wargames. The Pursuit of the Pink Panther** will follow . . . Is it true that **Tutankham** got that name because **Tutankhaman** didn't fit on the arcade cabinet? . . . Atari almost made a version of **Preppie** for the VCS but backed off the idea . . . Have you heard that **hand-held video games** on airplanes can interfere with the aircraft's radio communications? Maybe the Russians will come out with a game called **Airspace Invaders** . . . Contrary to some people's stereotype, the **U.S. Justice Department** has concluded that the coin-operated arcade business is **not** controlled by **organized crime figures** . . . **IBM** interviewed **60 Charlie Chaplin lookalikes** before they chose **Billy Scudder** for their ad campaign . . . **Bill Johnston,** an arcade owner in **Buffalo,** suggests taking the voice chip from **Sinistar** and putting it in **Pac-Man.**



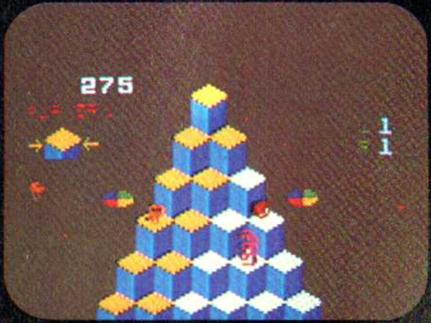
ATARI 5200



TI99/4A



ATARI 400/800/600XL



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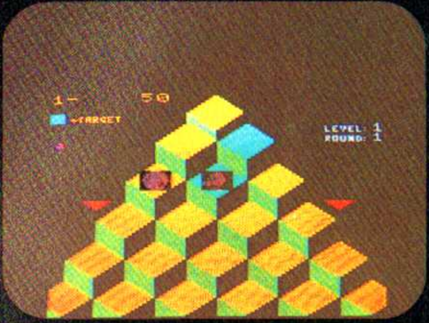

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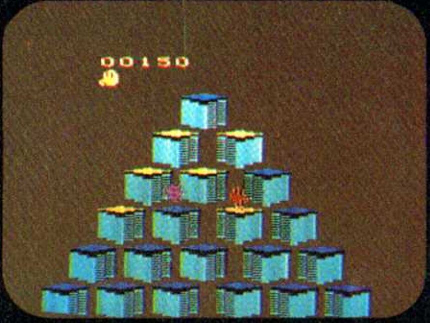
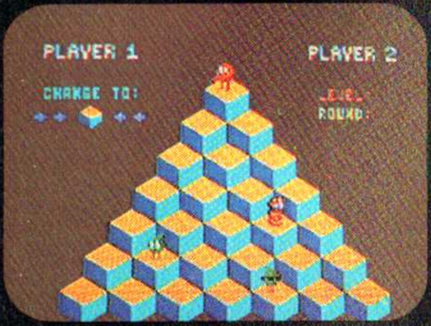
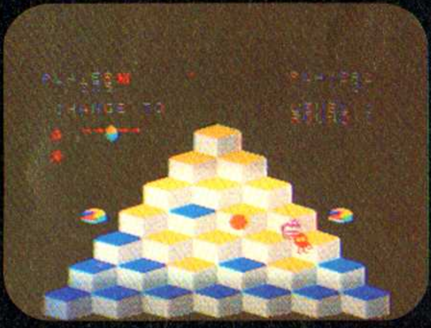


ATARI 2600

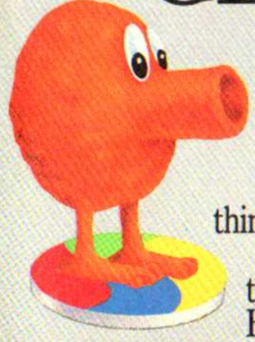


COMMODORE 64



COLECOVISION

HOW TO GET Q*BERT™ OUT OF YOUR SYSTEM.



If you've been wanting to play Q*bert, but haven't been able to find it available for your home system, your time has come. Because now you can keep things hopping with any of these popular home video and computer formats. Get going to your nearest video store and get Q*bert today. And while you're there, check out Parker Brothers' POPEYE,® FROGGER,™ TUTANKHAM,™ and SUPER COBRA.™ All the great Arcade Action games, now in all the great home formats.

® PARKER BROTHERS

POPEYE
FROGGER
Q*bert
Super Cobra
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NEW PRODUCTS

The GameKeeper

THE GAMEKEEPER

Gamers on the go will get off on the Gamekeeper, which protects your favorite VCS and Sears-type carts while you're on the road. Each one holds two games, and keeps them dust-free and ready to fire. From Innovative Concepts, it's only $3.95.

GAME SWITCHER

Tired of constantly unplugging *Pac-Man* so you can snap in *Robot Tank*? Want to save wear and tear on your carts *and* your VCS or Sears' cartridge port? Then move up to the RomScanner, which neatly holds up to 10 games and allows you to instantaneously launch any one with push-button ease. With one of these handy gadgets, you'll also find it impossible to misplace any of your favorite games (unless you happen to misplace the entire console too!). Available from Marjac Technology, Ltd., 2061 West Mill Rd., Milwaukee, WI 53209, for $59.97 (includes postage). Soon to be available for ColecoVision and various computers.

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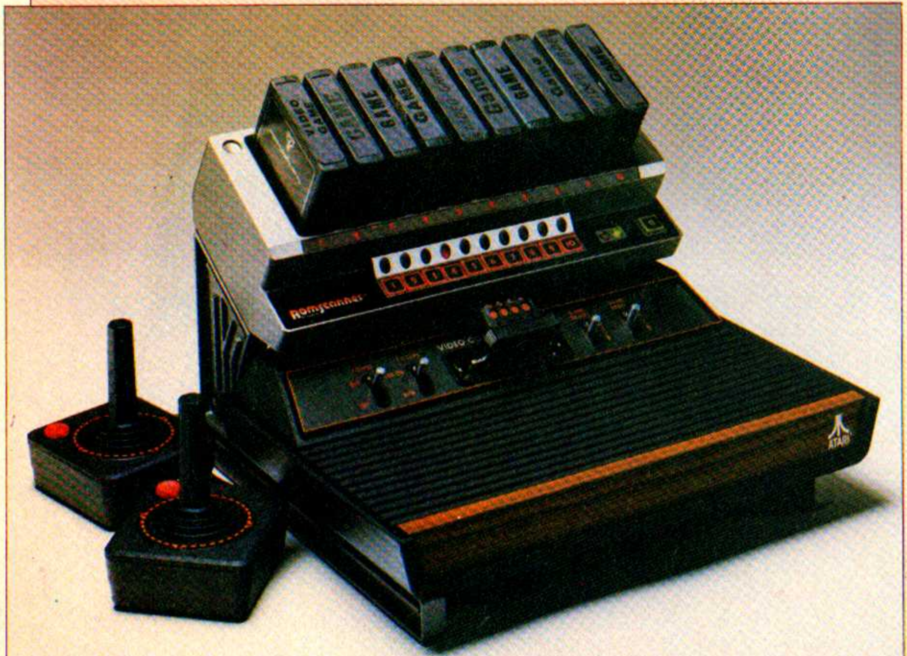
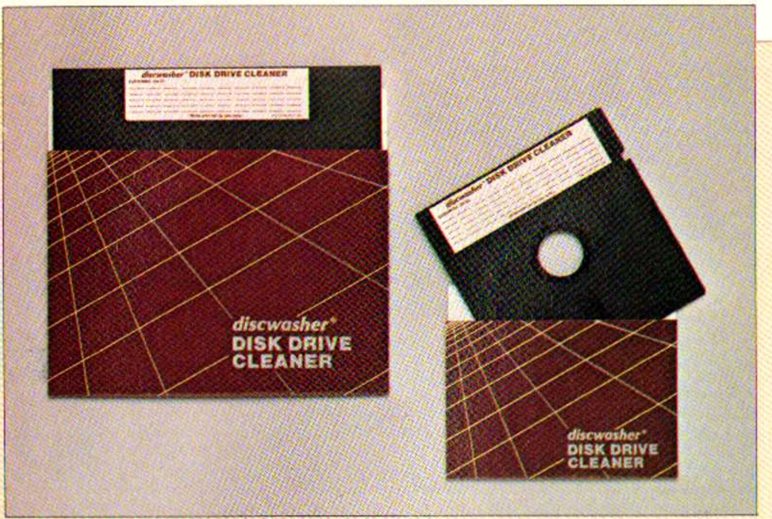


COLECO/TI KEYBOARD

Can't cope with that uncooperative Coleco controller? Or is your TI 44/9A's joystick driving you to the brink of video game homicide? Other companies manufacture custom controller/keyboards for these two, but their products often suffer from similarly unwieldly design flaws that make racking up high scores next to impossible. Those 100,000-point games are finally in sight, though, now that you can use almost *any* joystick or trackball on the planet by simply plugging it right in. Try the Champ Adapter #1, a keypad that converts any Atari-compatible joystick (except those requiring dual action buttons) into a ColecoVision controller for $15.95. The Champ Adapter #2, a one-piece unit, does the same thing for your TI, and it's only $4.95.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No, not like the one in the movie, bitbrain. We mean exotic on-line computer games like *MegaWars* and *DecWar*, which you can access on CompuServe with the Modemphone. It's a 300-baud, full duplex, Bell 103/113-compatible modem built into a standard rotary or touch-tone phone, so it also saves desk space. Price ranges from $250-$380, depending on options, and it's available from Racal-Vadic, 222 Caspian Drive, Sunnyvale, CA 94086.

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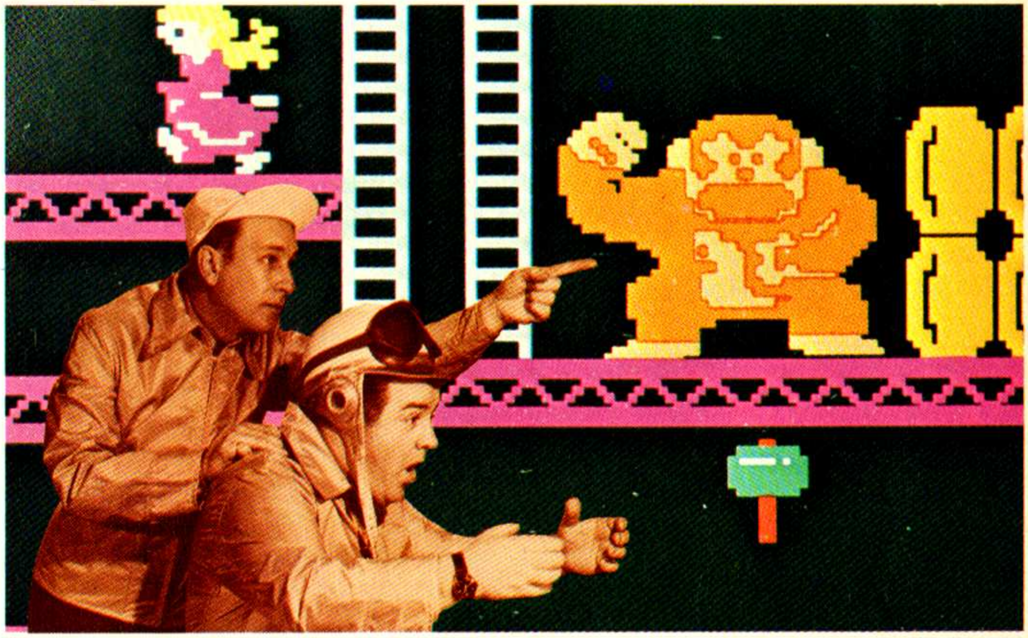
The Video Game Gazette

ALL THE NEWS THAT'S FIT TO PLAY

ABBOTT & COSTELLO MEET DONKEY KONG!

New laser games to incorporate old films



In a scene from **Who's on First?**, *the soon-to-be-released laserdisc game, Abbott yells at his sidekick: ''I told you to take a left at the next barrel, dummy! Now we'll never make it to the next ladder in time to save her from that big ape!''*

HOLLYWOOD—**Since the laserdisc game based on clips from Clint Eastwood's film *Firefox* hit the arcades, video game manufacturers have been looking at every hit film of the past 50 years for possible game material. After weeks of research,** MGM announced today that it has sold the rights to all of Abbott & Costello's classic comedies to Bally Midway, who will soon release games in which players can use a joystick to act out the role of Bud or Lou. *Abbott & Costello Meet Donkey Kong* will be followed by *Abbott & Costello Meet Frogger* and a laserdisc baseball game, *Who's on First?*

"We're buying up everything that lends itself to this format," said an anonymous source at Bally (B.D. Williams). "Blockbusters like *Kramer vs. Kramer* are naturals. In our game, you play Dustin Hoffman. Remember the scene in which his son falls off the monkey bars and scrapes his knee? In *our* game, if you move the joystick the wrong way, the kid falls off and breaks his *neck*."

Not to be outdone, Coleco has purchased the rights to *The Wizard of Oz* and will be releasing a home laserdisc game version. A *Pole Position*-type driving game with speech-synthesized munchkins advising the player to follow the yellow brick road, it will be retitled *The Wizardry of Oz*.

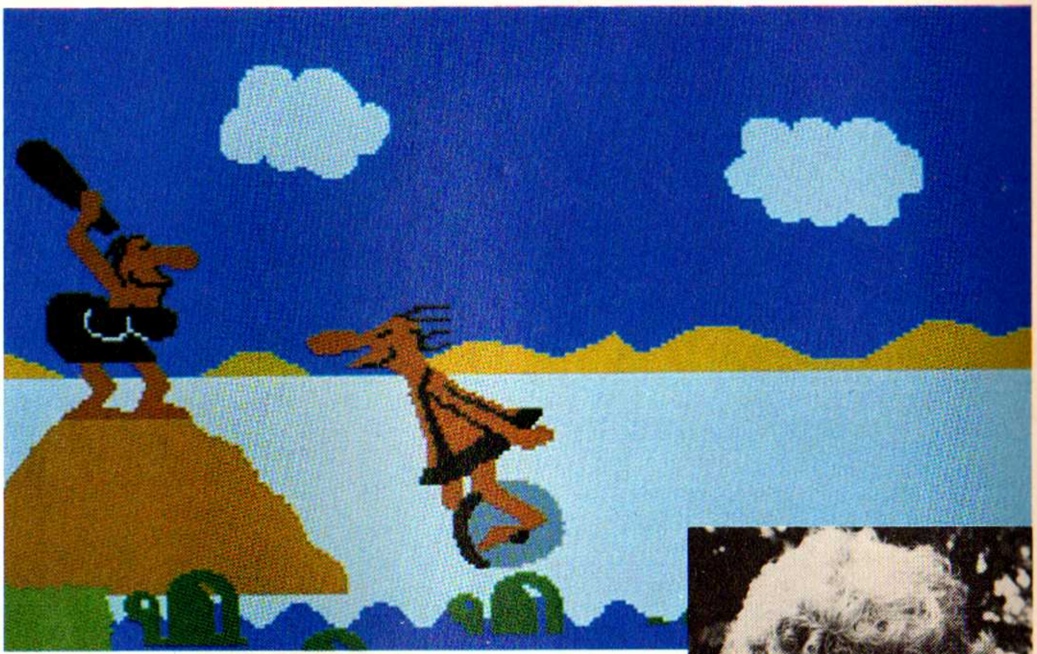
Other film-based laserdisc games to watch for: *Beach Blanket Bingo* (hit the fire button correctly to prevent Annette Funicello from singing), *Jaws* (so authentic that, instead of a sit-down or stand-up, it'll be played while you're submerged in salt water up to your chin), *The Great Dictator* (Charlie Chaplin's film will be the first laserdisc game for the IBM PC), *Zork The Greek* (a three part computer adventure game), and *The Sound of Music* (if you make a wrong move, Julie Andrews falls off a Swiss mountain and drowns in a vat of goat's milk).

The Video Game Gazette

SENIOR CITIZENS DIG *DIG DUG*, ETC.

MICHIGAN—You're never too old for a fast game of dot-gobbling, according to participants in the world's first Senior Citizens *Ms. Pac-Man* Tournament. It all started when some local retirement homes installed sit-downs to supplement the traditional checkers and chess games. The best part? They can play for free! The response was phenomenal, and more machines were ordered.

Since then the homes have discovered that videogames promote healthy competition, build self-confidence and provide a good workout without taking a great physical toll on elderly players. The games have been such a hit at the Riverview home in Cincinnati that the seniors are planning a field trip to the local arcade.



PREHISTORIC STATE OF THE ART

Johnny Hart's comic strips, *B.C.* and *Wizard of Id*, are already read by over 100 million people around the world. Now they will be available as computer games as a result of an agreement between Sierra On-Line and Sydney Development Corp. The first batch of an announced 80 (!) games will be: *Quest for Tires*, *Wiztype*, *Wizworld*, *Wizlab*, *Wizmath*, *Wizspell*, *Dot to Dot Zot* and *Bung Juggler*. The educationally oriented games will be available for "all major home computers" and ColecoVision. *Wiztype* will be the first independent product for Coleco's Adam computer.

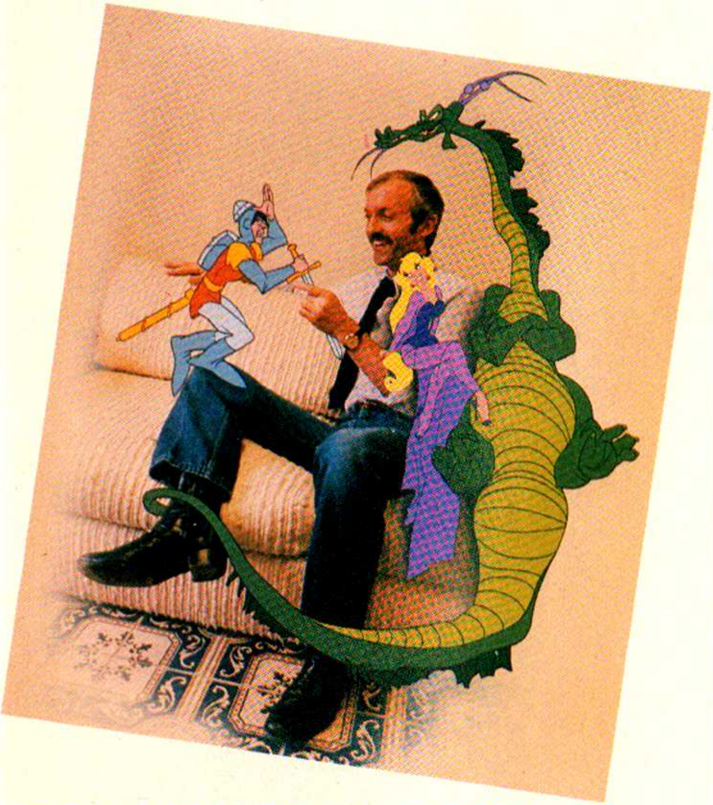
Johnny Hart

VIDGAME CHAMP OPENS ARCADE CHAIN

NORTH CAROLINA—***Leo Daniels, world record holder on*** **Asteroids** ***and*** **Pole Position** ***(66,710 points), is starting his own chain of arcades here. Called "World Class Amusements," the arcades will be filled with only the latest games. Leo is pictured here with 11-year-old Charlie Brown, who holds the distinction of being the youngest video game world champion. Brown (his real name) has scored 36,000,000 on*** **Zookeeper,** ***303,050 on*** **Ms. Pac-Man,** ***and owns the record for*** **Looping.**

ATARI
FOOD FIGHT

The Video Game Gazette



DRAGON'S LAIR II *IS COMING*

STUDIO CITY, CA—*As* Dragon's Lair *is becoming the biggest arcade hit since* Pac-Man, *animator Don Bluth is looking to the future. The next laserdisc game from the Bluth/Cinematronics/-Starcom team will be* Space Age, *and* Dragon's Lair II *will follow shortly. Ex-Disneyite Bluth plans four to five "participatory movies" in the next year.* Dragon's Lair, *according to Starcom, was only a small section of a bigger game called* Secrets of the Lost Woods. *This bigger game could be played "20 hours a week for six months without finishing it."*

It's a long way from Winnie the Pooh *and* Tigger Too.

THEY BUY AND SELL USED GAMES

*Forest Hills Used Video Games Cartridges Inc. 63-56 108th St., Forest Hills, NY 11375. (212) 897-6100

*National Video Exchange, 140 Oregon St., Box 990, El Segundo, CA 90245. (213) 322-6034.

*Video Game All-Stars. 666 Old Country Rd., Garden City, Long Island, NY 11530. (516) 222-1055.

*Cribbs & Associates, P.O. Box 1012, Bedford, TX 76021. (817) 498-3045.

*National Software Exchange. 700 Bloomfield Ave., Montclair, NJ 07042. (201) 783-6000.

SPACE SHUTTLE TO LAND

Activision designer Steve Kitchen doing research for his new game

WEIGHING IN

The latest big name to enter the video arcade business may turn out to be the greatest, or at least that's what his hype would have you believe. Former heavyweight boxing champion Muhammad Ali's name will soon be flashing over Chicago and New York City arcades that are part of a new chain, Muhammad Ali Arcades International.

The champ will reportedly rake in $60,000 a year for personal appearances. Beats peddling roach killer, that's for sure. But if Ali's bid for the big-time succeeds, what's next—Howard Cosell Coin-Ops?

FLOGGING A DEAD HORSE DEPT.

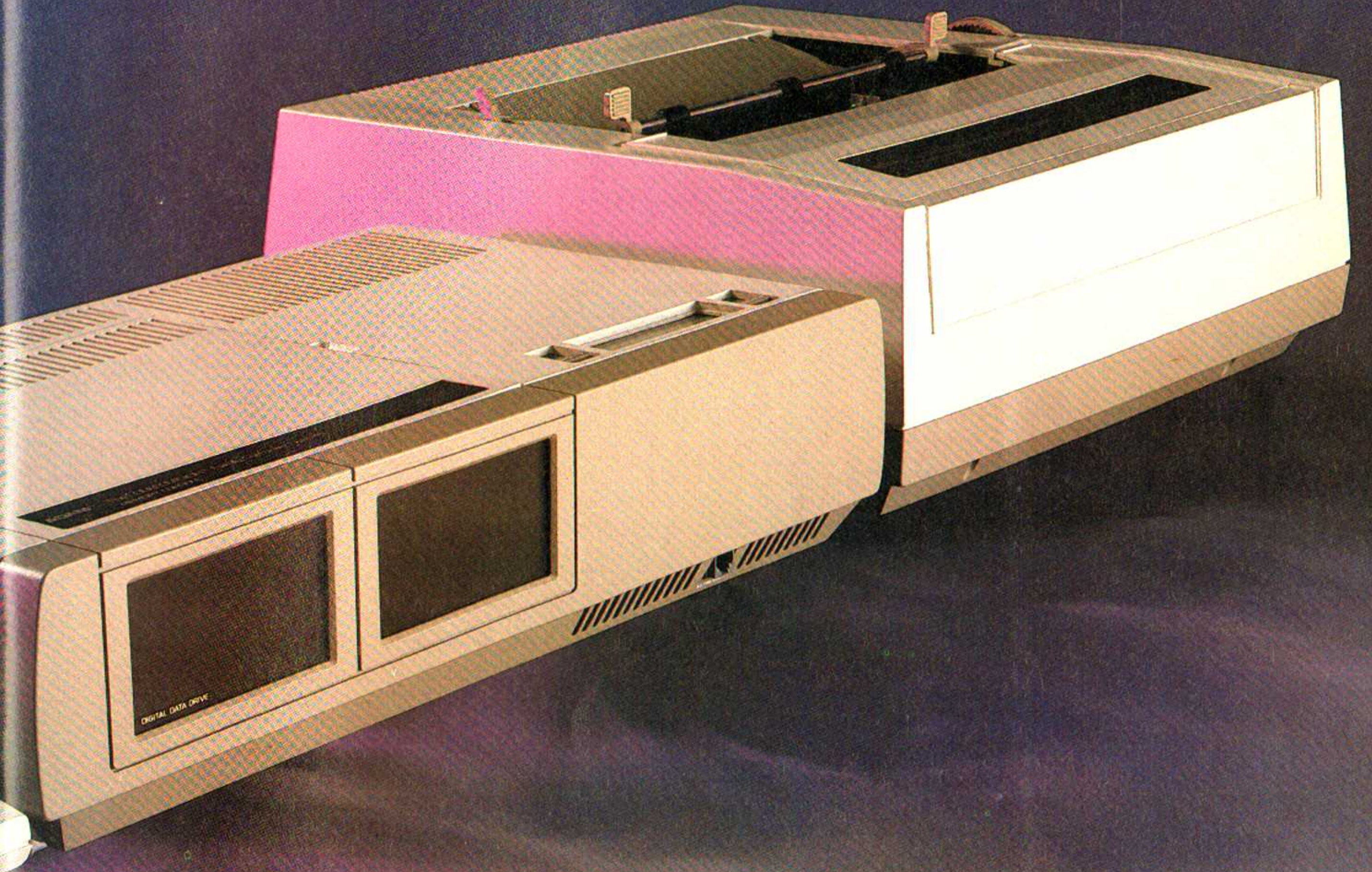
SAN FRANCISCO—Promoter George Coakley, best known for the pet rock, has a new gimmick he thinks is bound to be a smash —beating up on video games. Coakley (on the right) is pushing his plastic hammer with an accordioned head as a novelty item for the anti-arcade crowd.

And which game was selected as the first target for Coakley's new toy? *Pac-Man*, of course. If you can't beat the ghosts, you can now beat 'em up instead of joining them, says the inventor. (Even in its sunset years, *Pac-Man* is still getting all the attention. Too bad they can't let the great old arcade game just die in peace.)

THE TRUTH ABOUT COLECO'S ADAM

THE GREAT WHITE HYPE

The Adam hit last year's Consumer Electronics Show like an H-bomb whose mushroom-shaped cloud overshadowed every other piece of hardware and software on display. In the past six months of high-flying hype it's received glowing reviews in dozens of publications, all based solely on press releases. But now that the system's finally ready, Coleco's p.r. smokescreen has lifted—and we're seeing Adam's real face for the first time.



Coleco's ''dream machine.'' With 80K RAM, a letter-quality printer and its own data storage system, it was the biggest computer hit of 1983—even before it was released. But how will it fare now that it's finally on the shelf?

PHOTOGRAPH BY WALTER WICK

We first saw Adam through a smoked-glass display case that prevented anyone from even touching it, let alone giving it a "drive around the block" to see how it performs. Nonetheless, Adam did put on quite a show for onlookers, who were understandably impressed by the onscreen demonstration of its capabilities. Considering that the system included a letter-quality printer, computer, built-in word processor, game-playing capability and mass memory unit and would retail for $600, it's no wonder everyone left the CES show spellbound by Adam.

Of course the usual industry rumors circulated at last year's CES show, and in Adam's case, the most provocative one revolved around the attractive, professional and powerful appearance of its onscreen demo. Word was out—though never confirmed—that the Adam wasn't running the show at all, that its monitor was hooked up to cables attached to a real computer whose microprocessor was responsible for the effective onscreen display the way a ventriloquist throws his voice. Though this remains sheer speculation, the fact is that the Adam has not yet publicly performed as well as it did at its debut.

At a news conference at Coleco's headquarters in early September, the printer failed to consistently print as ordered. In addition, a reporter who managed to get to Adam's keyboard discovered that the unusual tape drive wasn't working according to plan. In fact, none of the four units he tried out functioned properly that day. Coleco blamed this on bugs in the word processing software, which they claimed would be completely operational in days.

Coleco missed two deadlines for FCC approval due to these problems. They were resolved two weeks later—but apparently only by compromising the word processor's capabilities. After a demonstration for the Boston Computer Society on September 28, some editing features proved unwieldy and others were missing altogether. (Moving blocks of text around was inadequately implemented, for example.) Coleco, who had first hyped Adam's *Smartwriter* as competitive with the sophisticated word processing software of other home computers, now says they were aiming for a simple system. (A $30-$40 "utility pack" to upgrade *Smartwriter* is promised for early 1984.)

Mysteriously enough, Adam's unique mass memory unit couldn't be demonstrated in Boston—someone in the crowd had disappeared with the tapes! It's supposed to be a 500K capacity digital Data-Pack that retrieves and stores data 10-15 times faster than a cassette drive. Based on technology used in mainframe computers, the Data-Pack also contributed to lengthy production delays. A parts supplier for Coleco says the drive didn't perform as expected and that a lot of fiddling had to be done with its internal mechanics. These and other technical problems will probably force retailers to jack up the predicted $600 price as much as $100.

> **"Don't count on using Adam for much more than games, simple word processing or learning BASIC for some time."**

It's also billed as having 80K Random Access Memory. The fact is that 16K of that is dedicated to a video display processor, so Adam actually possesses 64K of user-addressable memory. Since the BASIC language necessary for practical applications isn't built into the system but must be loaded separately, part of that 64K will be eaten up by the BASIC. No one yet knows how much RAM will go down the drain as a result, but it could be a substantial amount if Adam's version of BASIC is as powerful and has as many functions and operations as the home computers to which Coleco is so fond of comparing it with in their advertising.

The BASIC is also supposed to be Apple source code-compatible. Applesoft is a variation of BASIC in which a great deal of software has already been written, and this "software compatibility" gives the impression that you can simply pop in an Apple program and fire away. Not true.

According to the *Computer Entertainer*, an industry newsletter, this means you can only run an Applesoft program by first typing it line-for-line into the Adam. That's because none of the Apple's software is currently available in the nonstandard mass memory format of Coleco's newcomer.

The letter-quality printer is one of Adam's biggest selling points. It's supposed to print at 10 characters per second (about five minutes for a one-page single-spaced letter). Other features included standard interchangeable daisy wheels that permit different typefaces, a multistrike ribbon and a 9.5-inch carriage that accommodates single sheets or continuous fan-fold paper. But how durable, noisy and fast will this printer prove to be in the long run? No one can say at this point. And how will it compare with Atari's new $349 letter-quality printer, the 1027, which is being bundled with their new 600XL computer and the *Atari Writer* word processor for $600?

Adam was meant to be a "word processor that plays *Donkey Kong*." It does have a cartridge port that accepts all ColecoVision games, and comes with two controllers and the *Buck Rogers Planet of Zoom* game. And anyone already owning the original game console can plug in a $400 modified Adam and have an equivalent computer system.

But a computer is only as strong as its software, so let's see what's available. The *Smart* BASIC language is thrown in with the bundle. Adam's CP/M capability sounds great: more software has been written for this operating system than any other. The snag here is that none has yet been packaged for Adam's non-standard Data-Pack format. Neither has any other existing software, for that matter.

That's because major software houses don't invest their programmers' time writing or translating for a new computer until enough units have been sold to establish a lucrative market for the software. This has been the case with most new systems. (Even the best-selling Commodore 64 didn't enjoy a wide range of software until nearly a year after it was released.) So don't count on using Adam for much more than games, simple word processing or learning BASIC for some time.

Now you know the truth about Adam as it stands for the moment. Coleco's cranking them out as fast as possible, with extra assembly line workers hired at the last minute, so don't be surprised if you buy one and it has a few bugs in it. That doesn't mean you shouldn't choose Adam for a home computer system by any means—but you'd probably be smart to hold off until it's proven itself in the field. Watch for an in-depth "hands-on" evaluation of Adam in *Computer Games* as soon as Coleco delivers a fully operational unit.

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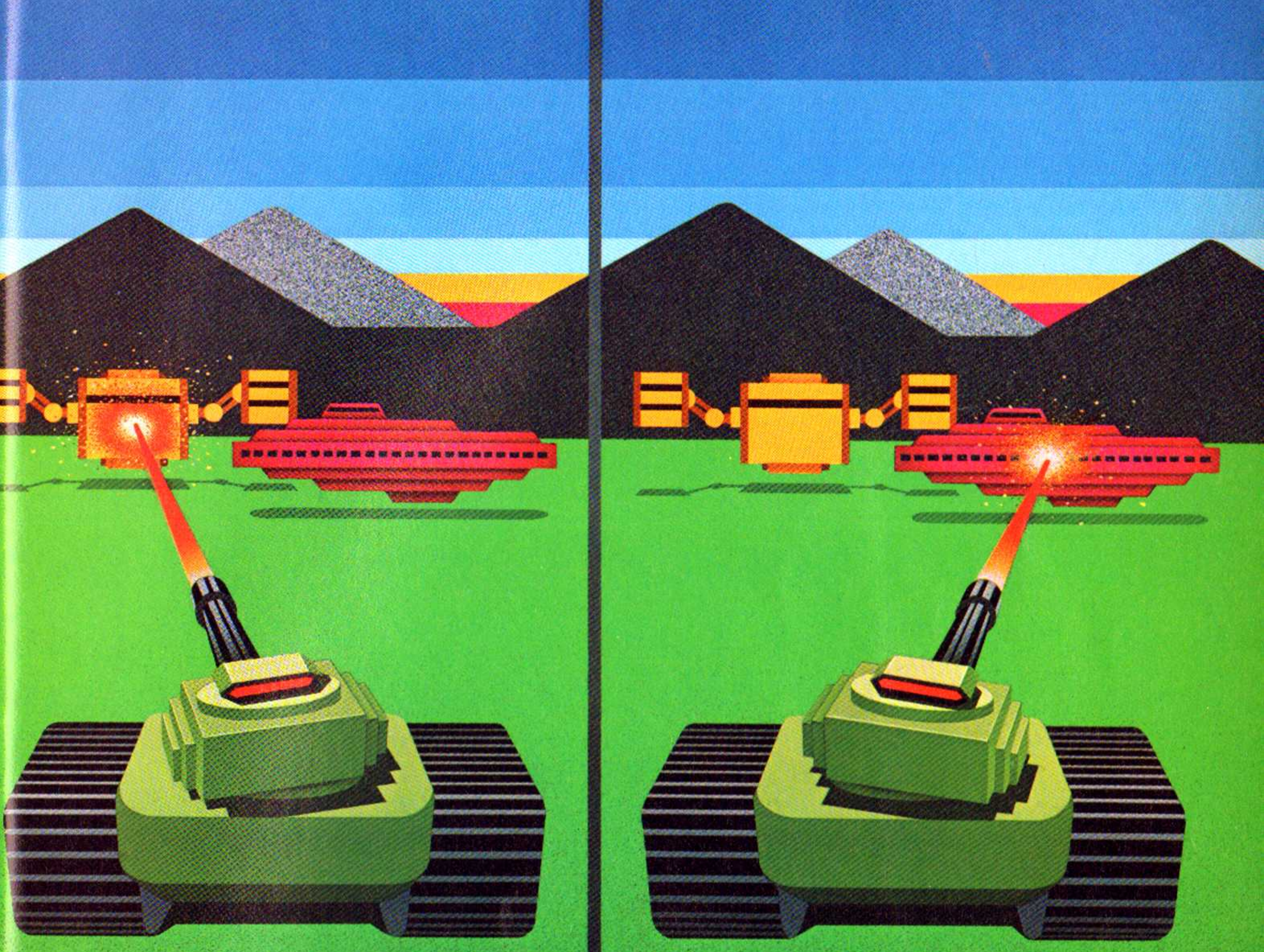

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The player on the right will most likely fail in his mission. He should've hit the fighter first. Even though it is worth 3,000 points less than the flying saucer, it is far more dangerous. It can destroy. The saucer can't.

There's another way you can rack up extra points, and you don't even have to fire a shot. By moving your tank to one side, you can often lure one enemy into another's line of fire.

Surviving BATTLEZONE is no easy mission. If you're up for it, climb into your troop transport and make tracks to the nearest store that stocks Atari games.

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AVALON HILL

T.A.C., S.C.I.M.M.A.R.S., Parthian Kings (AP). Paris in Danger (AT). TGIF, Computer Football Strategy (64, AT). Computer Diplomacy (TRS). Shuttle Orbiter (VCS).

BRODERBUND

Operation Whirlwind (AT). David's Midnight Magic (64).

COLECO

Super Action Baseball (COL).

CREATIVE

Crisis Mountain (VIC, 64). Pipes, Astroblitz (64). In the Chips (VIC).

DATASOFT

Moonshuttle, O'Riley's Mine (AT).

ELECTRONIC ARTS

Archon, Hard Mack, M.U.L.E., Murder on Zinderneuf, Worms?, Axis Assassin, Pinball Construction (64, AP, AT, IBM).

EPYX

Fun with Art (64). Fun with Music (VIC, AT, TI). Oil Barons (AP, IBM). Gateway to Apshai, Lunar Outpost (AT, 64, TI). Silicon Warrior, Dragonriders of Pern, SWAT Rescue (AT). Pitstop (64, TI, COL, AT).

FIRST STAR

Rent Wars (AT). Bristles (AT, AP, VIC). Panic Button (TRS, VIC). Top Secret, Dangerous Cargo, Saviour 1.

FOX

M*A*S*H, Porky's Beefsteak Tomatoes (VIC, AT). Voyage to the Bottom of the Sea, The Fall Guy (VCS, VIC, AT, COL, TI).

GAMESTAR

Star League Baseball, Adventures of Dutch Doogan (AT, 64). Starbowl Footbowl (64).

IMAGIC

Laser Gates (VIC, 5200, TI). Nova Blast (VIC, COL). Wing War, Fathom (VCS, 5200, IN, COL, VIC, AT, TI). Moonsweeper (VCS, 5200, IN, COL, VIC, AT, TI).

INFOCOM

Enchanter, Infidel (AT, AP, 64, TRS, CP/M, IBM & others).

MATTEL

Major League All-Star Baseball, Motocross, Pinball, Advanced Dungeons and Dragons, "Treasures of Tarmin," Kool Aid, Thin Ice, Bump 'n' Jump, Locomotion, Rocky and Bullwinkle, Yogi's Adventure (IN).

MICROLAB

Dino Eggs, Globe Grabber, Station Five (COL).

MUSE

Titan Empire (AP).

N.A.P.

Pursuit of the Pink Panther (COL, ODY, VCS, 5200, IN, VIC, 64, AT, TI).

PARKER

Mad Planets.

PENGUIN

Bouncing Kamungas, Expedition Amazon, Ringquest, Transylvania II, The Coveted Mirror, Minit Man, The Quest (AP, AT, 64). The Spy Strikes Back (AP, AT). Pie Man, Thunderbolts (AT, 64).

ROKLAN

Rack 'Em Up! (IBM).

SCHOLASTIC

Flag Nut, Agent USA, Word Climber, Microzine #2 (AT).

SELCHOW & RIGHTER

Glib (VCS).

SIERRA ON-LINE

Quest for Tires (COL, 64, AP, AT). Mr. Cool, Apple Cider Spider, Creepy Corridors, Flip-n-Match, Sammy Lightfoot, Jr., Ultima: Escape from Mt. Drash.

SIRIUS

Capture the Flag (AT, AP, 64, VIC). Gruds in Space, Wavy Navy (AP). Blade of Blackpoole, Type Attack (64). Buzzard Bait (AP, IBM). Ozzie Ozone, Shadowscorcher (64). Plasmania (AP, VIC). Gruds in Space, Squish 'Em (VIC).

STARPATH

Rabid Transit, Frogger, Sweat: The Decathlon Game, Party Mix, Sword of Saros, Survival Island (Supercharger VCS). Phaser Patrol (COL). Escape from the Mindmaster, Dragonstomper (COL, AT). Sweat, Party Mix, Mindmaster (5200).

SSI

Combat Leader, Geopolitique, Computer Baseball (64). Battle for Normandy (IBM). Eagles (AP, AT, 64).

SUBLOGIC

Night Mission Pinball (64). Flight Simulator (AT, 64).

TIGERVISION

Espial, Super Crush, Sky Lancer, Changes.

HIT GAMES & HIGH SCORES

COMPUTER GAMES

1. *ZORK I (Infocom)*
2. *ZAXXON (Datasoft)*
3. *FROGGER (Sierra On-Line)*
4. *CHOPLIFTER (Broderbund)*
5. *TEMPLE OF APSHAI (Epyx)*
6. *DEADLINE (Infocom)*
7. *FORT APOCALYPSE (Synapse)*
8. *JUMP MAN (Epyx)*
9. *MINER 2049ER (Big Five)*
10. *ZORK II (Infocom)*

HOME VIDEO GAMES

1. *Q*BERT (Parker)*
2. *ENDURO (Activision)*
3. *MS. PAC-MAN (Atari)*
4. *CENTIPEDE (Atari)*
5. *BURGERTIME (Mattel)*
6. *POLE POSITION (Atari)*
7. *ROBOT TANK (Activision)*
8. *JUNGLE HUNT (Atari)*
9. *PITFALL (Activision)*
10. *KEYSTONE KAPERS (Activision)*

ARCADE GAMES

1. *DRAGON'S LAIR (Cinematronics)*
2. *STAR WARS (Atari)*
3. *POLE POSITION (Atari)*
4. *CHAMPIONSHIP BASEBALL (Sega)*
5. *MS. PAC-MAN (Midway)*
6. *GYRUSS (Centuri)*
7. *KRULL (Mylstar)*
8. *FAX (Exidy)*
9. *GALAGA (Midway)*
10. *MILLIPEDE (Atari)*

HIGH SCORES

STAR WARS: 20,100,996, by Mark Tuper

GALAGA: 22,222,630, by Lloyd Dahling

MARIO BROS.: 462,170, by Mike Ternasky

DRAGON's LAIR: 450,974, by Steve Harris

CRYSTAL CASTLES: 823,840, by Eric Ginner

TEMPEST: 11,999,978, by David Plummer

Our thanks to Softsel Computer Products for the computer game list, to RePlay for the arcade game list, to Walter Day and Twin Glaxies International Scoreboard for the high scores, and to Billboard for the home video games list, which is ©1984 by Billboard Publications, Inc., compiled by the Billboard Research Department and reprinted with permission.

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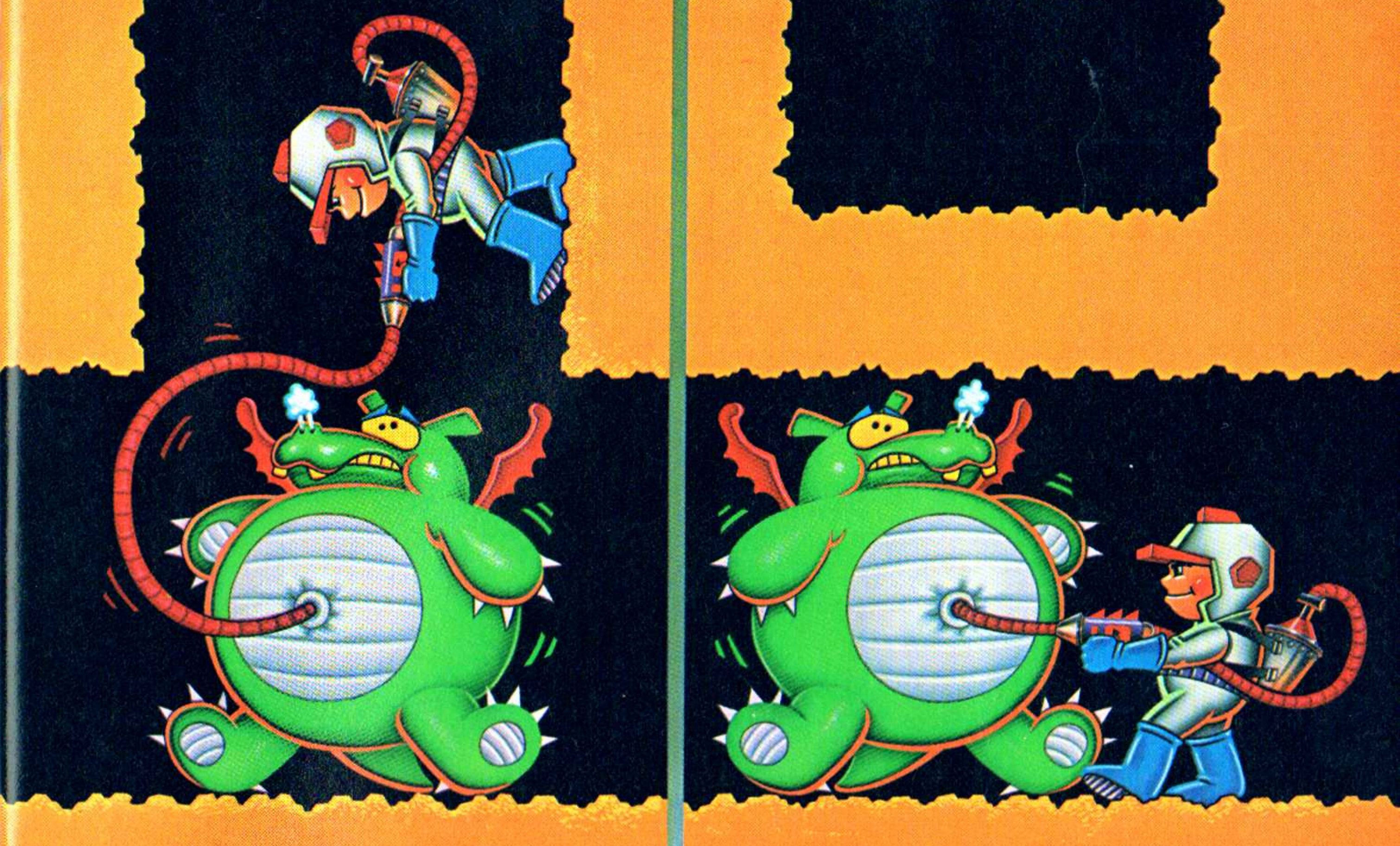

Which is the best way to inflate your score?

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ATARI

Better find out. We've done our groundwork on DIG DUG so well, it plays just like it does in the arcade. So don't dig yourself a hole. Like the player on the left. Sure he'll score points for blowing up the Fygar™ in a vertical path. But blow up the Fygar in a horizontal path, like the player on the right, and score twice as many points. A landslide.

You can dig up even more points by uncovering a bonus veggie. But you get only one on each level. All you have to do is drop two boulders and you'll see it. Buried treasure disguised as a veggie.

Only Atari makes DIG DUG for the ATARI® 2600™ Game, Sears Video Arcade† systems, and versions exclusively for the ATARI 5200™ Super-System and all ATARI Home Computers.

So get to your nearest store and dig into your pockets. For DIG DUG.

Here comes Dig Dug™* from Atari.®

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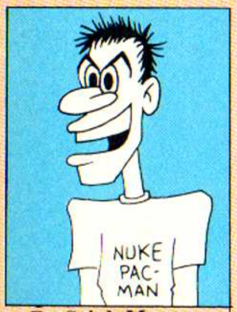
SCHOOL'S OUT FOREVER!

The Latest In Educational Gaming



By Stick Masters

ILLUSTRATION BY JOHN HOLMSTROM

Hi! Stick Masters here again, here to tell you about the best and worst in educational computer games. Like I said last month, I like to play arcade games the best, like *Elevator Action* (my new favorite). But since I've started to play these computer games, I've started to like them a lot! In fact, I'm bugging my parents to get me a computer for Christmas.

So far, playing these educational games hasn't made me any smarter that I can tell. Still, some of them can be fun. Parents like it if a game is supposed to teach you stuff instead of being fun.

The best educational game I've played yet is **Fun With Art,** by Epyx. I know, it's a stupid name, right? But this game is great! It's complicated, but you can make great pictures like the one I did here of myself. Believe it or not, it took me a couple of hours to finish. It would have looked even better if I had a couple more weeks to figure out the game.

Fun With Art opens with a board covered with symbols. Each symbol represents a different function. By moving the joystick, you move the cursor. When it moves over the symbol, it selects a function for drawing the picture.

Let's say you move the cursor over the top left symbol, a squiggly line. Press the trigger and you're set to draw. The draw mode makes the cursor leave dots and lines behind when you move the joystick. It's like Etch-a-Sketch on a computer. When you finish with the draw mode, push the Start button. That brings you back to the board with all the symbols on it. There are 26 different functions to choose from, which gives you a lot to fool around with. You can draw boxes, words, lines, circles and change colors, erase, or anything. My favorite feature was the "block zoom" mode. When you use that, you can zoom in on a tiny part of the picture to do real detailed work.

To give you an idea of how it works, I'll tell you how my mini-masterpiece was drawn. First I put my name up with the large-text mode. I moved the cursor to the place I wanted each letter and typed in the letters. For the face and body, I used the box mode. All you do is select the opposite corners by moving the cursor to where you want them and pressing the trigger. The computer does the rest. To draw the eyes, nose, ears and mouth, I used the zoom mode. I counted off each dot on either side of the face to make it symmetrical. That was the most work. Then I put in the hair with the fill down mode. Every time I moved the joystick across the screen and pressed the trigger, the color I picked out would fill up the screen from the cursor down to the boxes I drew. The scraggly hairs I added by pushing the trigger but not moving the joystick.

Then I tried to fix the colors. That's when I got into trouble. The color control is pretty hard to figure out. I guess that's because there's 128 to choose from. I also couldn't figure out how to save the picture once I was done, so we took a picture of it.

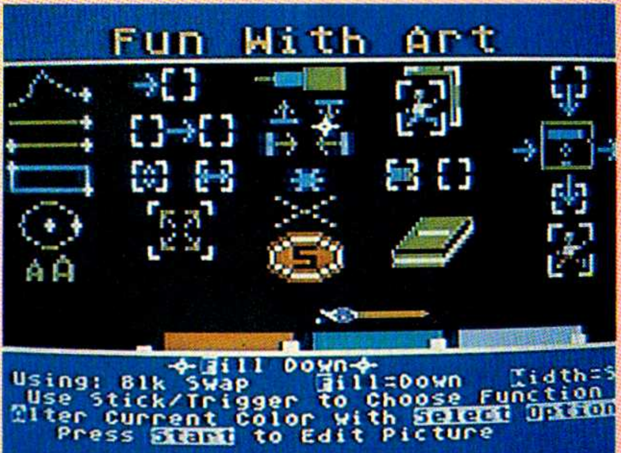
That's the best thing about *Fun With Art*. There's so much stuff you can do with it. My friend, Fast Eddie, likes it even better than me 'cause he wants to design computer graphics when he grows up. This game gave him a real good idea of what you can do with the computers. I recommend *Fun With Art* very highly to anybody with an Atari computer 'cause it's fun whether you know how to draw or not. I had a lot of fun fooling around with it, pushing any old button just to see what would happen. The only thing I didn't like about it is the name, which is corny.

The other games they gave me to review weren't as good, but some were okay. The only one I really *didn't* like was **Titan Empire.** It's supposed to combine an *Asteroids*-type outer space shooting game with strategy based on the dimensions of the solar system. Now, I'm pretty interested in space and science fiction. But this game is dull. The action is too slow. It takes forever to travel to a planet. Once you get there it's no big thrill, 'cause the graphics are so bad the planets aren't worth looking at. There's also too much to keep track of during a game. You're supposed to move the spaceship, fire at enemy ships, gather information on planets, give pilot commands and beam up fuel or armies. It's too complicated, and it's almost impossible to tell what's going on. When I play a game like this I wonder if the guy who designed it ever gave it to someone else to play to see how it could be improved.

Pipes by Creative Software is more like a regular video game than an educational one. It's for the VIC-20. You move a little man, "Arlo the plumber," around the screen with the joystick. He picks up different-shaped pipes from the right side of the board and travels around hooking up houses to a lake, which is the water

CONTINUED ON PAGE 72

The main menu makes it easy and fun to use the program's 26 different drawing functions. You can draw boxes, words, lines, circles or anything—all with a joystick!



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         Fill Down
Using: Blk Swap      Fill=Down   Width=S
 Use Stick/Trigger to Choose Function
Alter Current Color with Select Option
   Press Start to Edit Picture
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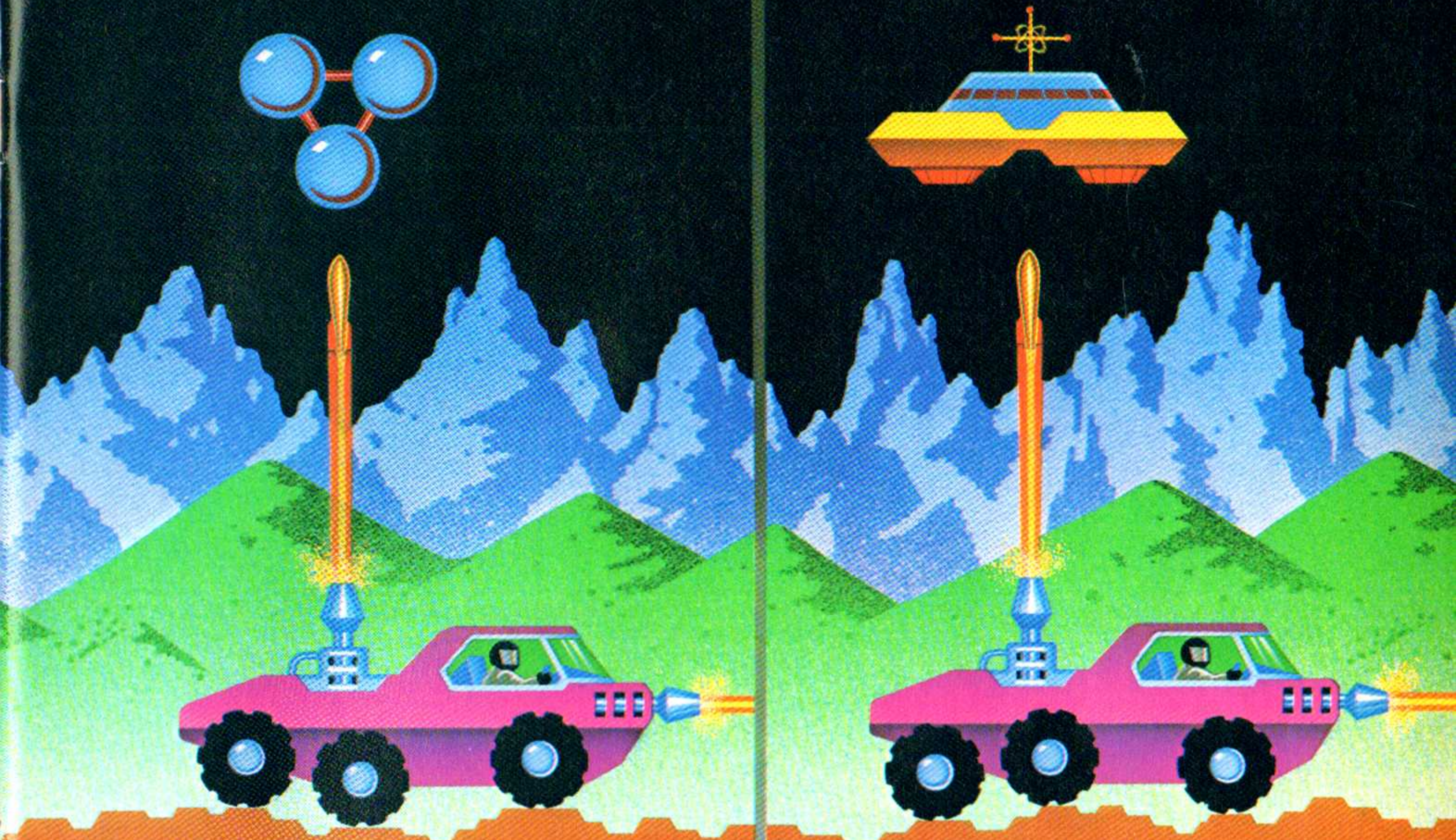


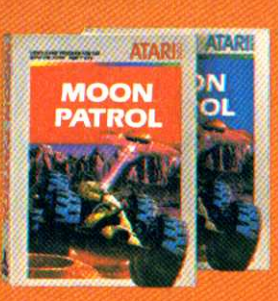
Which player is really firing up his score?

Think quick. The new home version of Moon Patrol looks so much like the arcade, it could fool the man in the moon. So don't find yourself in a crater. Like the player on the right. He'll get only 100 points for using his Moon Buggy to shoot down a Moon Strafer. While the player on the left will get twice as many points for shooting down a Crater Maker. A victory as great as the lunar landing.

Your score can wax even higher. You'll get 80 points every time your Moon Buggy jumps over a rock. But you'll get 100 points when you blow up a rock.

Only Atari makes Moon Patrol for the ATARI® 2600™ Game, Sears Video Arcade† systems, and a version exclusively for the ATARI 5200™ SuperSystem.

So get on your lunar module and scan your local moonscape for Moon Patrol.



Here comes Moon Patrol* from Atari®

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THE HOTLINE

Up-to-the-minute gaming news

...NEW YORK...LONDON...PARIS...CUPERTINO...

ADAM is not the only news coming out of COLECO. Having secured the rights to DRAGON'S LAIR, they have announced that there will be an INTERACTIVE VIDEO DISC PLAYER to interface with Adam by the end of 1984. LASERDISCS may be coming home sooner than we think. The company has also halted production of COLECOVISIONS in order to devote all of the assembly lines to cranking out Adams. They will resume ColecoVision production shortly. Perhaps the biggest news from Coleco is that they have signed an agreement with AT&T to deliver home video and computer games over existing PHONE LINES. An inexpensive MODEM will be designed so Adam owners and ColecoVision owners can subscribe to the network and receive "interactive and strategy games, arcade favorites and entertainment software." Finally, Coleco has SETTLED its lawsuit with LOGICAL BUSINESS MACHINES. Both companies will use the name "Adam" for their non-competing computer systems.

BAD NEWS DEPARTMENT: TELESYS, makers of the video games FAST FOOD, COCO NUTS, STARGUNNER, and DEMOLITION HERBY, has pulled out of the video games business. IMAGIC, who have been making some great games (but haven't had a monster smash since DEMON ATTACK), will stop manufacturing games and become a DEVELOPMENT COMPANY. This means thay will design games and SELL them to other companies. However, that may be difficult since superstar designer ROB FULOP has left the team. OSBORNE COMPUTER has filed for BANKRUPTCY, owing creditors $45 MILLION.

SALES FIGURES: According to VIDEO MARKETING GAME LETTER, here is how the top home computers are selling--COMMODORE VIC-20 and 64: 160,000 per month. TEXAS INSTRUMENTS: 100,000-150,000. TIMEX SINCLAIR: 100,000. ATARI: 65,000. RADIO SHACK: 35,000. They also say that 9% of U.S. HOUSEHOLDS had a home computer at the end of 1983. In a related story, DEALERSCOPE MAGAZINE analyzed the components of the TI 99/4A and the VIC-20 and discovered that the machines COST exactly $84.95 and $64.40 to manufacture, including all parts and labor.

QUICKIES: The 114-year-old CORCORAN GALLERY OF ART in Washington has installed 200 arcade games in its lobby to help raise funds for the Corcoran School of Art. ...The first three games ATARI will release for ColecoVision will be GALAXIAN, CENTIPEDE, and DEFENDER. They will be making these three, plus PAC-MAN, for INTELLIVISION...INFOCOM'S all-text games are now ALL-TEXT BOOKS. ZORK #1: THE FORCES OF KRILL, ZORK #2: THE MALIFESTRO QUEST, and ZORK #3: THE CAVERN OF DOOM, have been released simultaneously and should be at your bookstore for $1.95... RCA has introduced a VIDEODISC player that contains a MICROCOMPUTER. Suggested retail price--$499...Meanwhile, CINEMATRONICS and PIONEER (who make the laserdisc players) are having a tough time keeping up with the demand for DRAGON'S LAIR...EXIDY, another arcade game manufacturer, claims their soon-to-be-released CROSSBOW goes one step BEYOND mere laserdisc technology, which they call "a flash in the pan."

MORE QUICKIES: PIZZA TIME THEATER, suffering from competition from imitation restaurant/arcades, will close ten stores...PENGUIN SOFTWARE, saying that you shouldn't have to empty your wallet every time you buy a game, has reduced their prices to $19.95...COPYRIGHT LAWS have been extended to computer software, according to the U.S. COURT OF APPEALS in Philadelphia. APPLE stands to gain the most from this ruling. RIPOFF computers called GOLDEN APPLE, ORANGE, and LEMON are made in Asia, and FRANKLIN admitted in court that it had copied the OPERATING SYSTEM of the Apple.

The winner of our WIN AN ARCADE GAME CONTEST is PERRY RODGERS of Napa, CA, who scored 9,026,864 on CENTIPEDE. The other winners are: Andrew Tayrien, Jim Leggett, Danny Dawes, Jeff Zillansky, Russ Perreira, William Shull, Chris Lewis, Jay Sullivan, D. Marc Wisniowski, Dave LaTour, Bobby Finley, Ernie Ortiz, Sandy Altizer, Duane Webster, Mike Minnehan, Kevin Gentry, Michael Rosenthal, Kip McCleary, and Pat Moore. Congratulations to all!

For more up to date news...

CALL THE COMPUTER GAMES HOTLINE (212) 581-8267

How to make sure you don't get 5 pairs of underwear for Christmas.

Fill in this checklist, tear it out and give it to your parents. Help them figure out that this Christmas you'd like software and hardware. Not underwear.

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- ☐ **Centipede**™
- ☐ **Phoenix**[2]
- ☐ **Vanguard**[2]
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- ☐ **Kangaroo**™, [4]
- ☐ **Dig Dug**[5]
- ☐ **Galaxian**[6]
- ☐ **Pole Position**[7]
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CREATE YOUR OWN GAMES

(Even if you can't tell a bit from a byte!)

By Owen Linzmayer

Most of us have fantasized about designing our own video or computer game. Unfortunately, few of us have the time or programming knowledge to actually create a game. Now there are a batch of new games that allow you to create and modify your own games, and you don't have to know the first thing about computer programming!

Pinball Construction Set

Following the tremendous success of *Raster Blaster,* the first computerized pinball game for the Apple, programming wizard Bill Budge wrote *Pinball Construction Set*. This versatile program allows users to quickly and easily build pinball games of their own design.

In *PCS,* the game designer uses a joystick-controlled hand to drag various pinball mechanisms around the screen. The playfield is located on the left of the screen, and the parts box on the right. After choosing a machine piece from the parts box, the designer places it anywhere he likes on the pinball table.

Let's say you want to place a large bumper in the middle of the pinball table. Simply move the little pointing hand so that it is touching the desired bumper and then depress the button on the joystick. This picks up the piece. Now slide the bumper over to the pinball field and release the button. That's it—the bumper is now in position. You can move any of the other pieces that easily, even if they are already on the playfield.

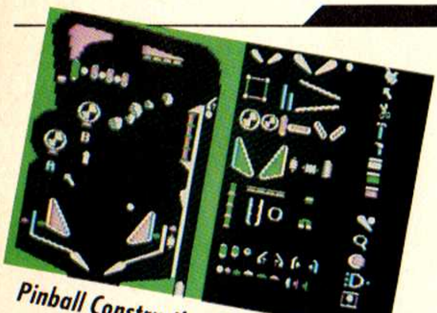
By touching the special symbols (called ''icons'') along the right-hand edge of the screen, you can access submenus that allow you to paint the playfield, save or load a game from disk and change such things as score values, sound effects, gravity, bounce, kick and speed.

The beauty of *PCS* is that you can always remove your mistakes, as well as

ILLUSTRATION BY JEANETTE ADAMS

change anything you like. Explains "Trip" Hawkins, president of Electronic Arts, "*Pinball Construction Set* was written so that the user can learn by doing." In fact, *PCS* is so easy to understand that you don't have to read more than a single page of instructions before you are designing your own games. *PCS* is available for Apple, C-64 and Atari computers.

Credit must be given to Bill Budge for being the "father" of computerized construction sets. Most of the following packages detailed in this article were spawned by the success of *PCS*. By the time you read this, Electronic Arts should be marketing *Music Construction Set* by Will Harvey. As Trip hinted prior to its release, this package can be thought of as a powerful word processor for music. Initially for the Apple, the *Music Construction Set* will soon be available for the Atari and Commodore 64 computers.


Pinball Construction Set

Night
Mission
Night Mission Pinball

In *Pinball Construction,* you use a joystick-controlled hand to drag various pinball mechanisms around the pinball table on the screen."

Maze Craze

At the height of *Pac-Man* fever, software companies began pumping out endless variations on the eat-'em-up maze theme. If you can't find a maze game that suits your needs, it's only logical that you should create your own with *Maze Craze*, a construction set from Data Trek. What Bill Budge has done for pinball lovers, *Maze Craze* author Eric Hammond matches for *Pac-Man* fanatics. Using a combination of joystick control and keyboard input, the player can create entire mazes with his or her own animated characters.

The *Maze Craze* disk comes with ten finished mazes that you can modify to your liking. Since mazes aren't just composed of simplified graphics objects as are pinball fields, it makes sense that creating entire boards can be complex and time-consuming. The first thing to do is to set up the actual walls of the maze.

Using a cursor that slinks around like a worm, you can build literally millions of different mazes of all sizes and shapes. If you want, you can construct mazes that look exactly like those of the arcade game, *Ms. Pac-Man*. The possibilities are endless.

Not only do you have control over where to place the monsters and players' characters, you can also animate them. After entering the edit mode, the different objects are enlarged and displayed so that you can modify or replace them altogether with a few presses of the joystick button.

Just as coin-op video games have operator-selectable settings to change the difficulty, so does *Maze Craze*. By pressing a key or two, you can set the game speed, collision sensitivity and skill level, as well as the aggressiveness of the ghosts.

Maze Craze is possibly the most underestimated package on the market. Even though it is a top-notch construction program, few people are aware of its existence. If you consider yourself a serious *Pac-Man* player, then you cannot afford to be without *Maze Craze*.

The Arcade Machine

A joint effort by Broderbund's Chris Jochumson and Doug Carlston, *The Arcade Machine* fills the gap left by *Pinball Construction Set* and *Maze Craze;* it creates shoot-'em-up games of the *Space Invaders* variety.

Similar to *Maze Craze*, the editing features of *The Arcade Machine* are broken down into different menus. After selecting a master category heading such as "shape creator," a detailed submenu is usually presented. From here you can get right into the thick of things.

As the packaging states, you can design the enemy characters in addition to your video alter ego. This editing phase is almost exactly like that found in *Maze Craze*, only much more tedious as joystick input is not allowed. Using the keyboard to draw these characters in high resolution graphics takes quite a bit of time. Each object can be drawn in seven different poses which, when flashed in sequence, create the illusion of detailed animation.

When you are satisfied with the way the enemy looks you then place it into a larger group called a block. Finally, you create the path along which the block of aliens moves.

One thing I especially liked about *The Arcade Machine* is the control you have over sound effects. While the Apple isn't the best machine in the world as far as audio output goes, it can provide a wide range of effects. Pitch, duration and cycles are all under your command. All you must do is type in the appropriate numbers.

If you have the time to sit down and really get into designing your own games, *The Arcade Machine* is what you are looking for. It is available for Apple and Atari computers. If you just want to mess around with an already existing game, check out some of the following.

Lode Runner

Lode Runner is a unique game in which you must retrieve chests of stolen gold that are scattered throughout a 150-room underground complex.

Using either a joystick or the keyboard to move your little man around the screen, you must avoid contact with the Bungeling guards as you climb ladders, fall through trap doors and jump from level to level. All this, just to recover some stolen treasure chests. Is it worth it? You bet!

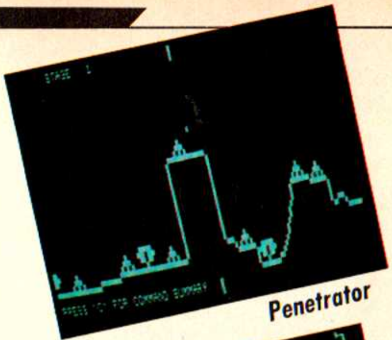
Aside from an inherently good game concept, one of the most appealing features of *Lode Runner* is the almost count-less number of rooms. Each underground room poses its own problem. Sometimes cracking the puzzles merely requires quick footwork, while brains are needed for others.

With 150 different rooms, you may not even want to create your own. Nevertheless, you can. The documentation goes to great lengths describing the process of building rooms of your own design. It's easier than you may think.

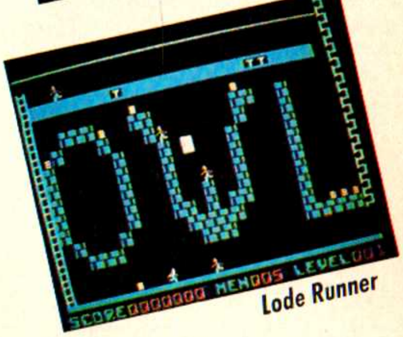
After entering the edit mode, the screen is cleared except for a flashing white block (cursor) which marks the section you are currently working on. All you do is press a number (0-9) to place the corresponding game piece in that spot. If you hit the number eight, for example, an enemy guard is drawn. After you have built and play-tested your room, it may be saved to disk and retrieved later for more modifications or editing.

Lode Runner represents one of the best software buys of the year. Not only do you receive a wonderful game that never fails to challenge you, but you also get an excellent game generator. It's for Apple, Atari, IBM, VIC-20 and Commodore 64.

If you've ever wanted to lay waste to Tokyo, *Crush, Crumble and Chomp,* featuring Godzilla or King Kong, is just the game for you."



Penetrator



Lode Runner

Penetrator

Penetrator is a TRS-80 game from Melbourne House that borrows heavily from the arcade hit *Scramble*. Your mission is to fly past four sections of enemy terrain and at the end of the last tunnel, destroy a nuclear bomb cache.

Each leg of your journey is made more hazardous by the presence of enemy missiles, radar dishes and paratroopers. You have two weapons with which you are to destroy the enemy: bombs and missiles.

Although *Penetrator* is not as free-form as *Lode Runner*, it can create an infinite number of game variations. In the edit mode you control the cursor with the four arrow keys. By pressing combinations of other keys you can "build" the ground below, as well as the ceiling above. After the terrain is set you plunk down enemy objects anywhere you like. Once you are satisfied, you can save your creation to any of the "modified terrain buffers" on disk.

Penetrator boasts good graphics, as far as the TRS-80 goes, and wonderful sound effects. The game is very addictive, but even after extended play it is not easily mastered.

Crush, Crumble and Chomp!

Who can forget late-night movie monsters such as Godzilla and King Kong? Conceived and created in our time, they are already classics. If you have ever wanted to lay waste to Tokyo just once, then *Crush, Crumble and Chomp* by Epyx is the game for you. Not meant for joystick twitchers, this game appeals to the strategist in each of us.

CC&C is a game like no other. After selecting the movie monster you want to control (Yes, you are the bad guy for once!), you choose your objective. Options include survival, destruction and the slaughtering of innocent people. Before starting play, you must choose which city you want to demolish. My favorite is New York. You may prefer Washington, though.

If you don't fancy any of the pre-packaged movie monsters that come on the game disk, you are allowed to design your own. The process is very simple. The first thing you do is choose one of eight base carcasses, from robot to insect. Once done, you may endow your creature with special powers and abilities.

Each carcass begins with a certain number of "crunch credits." By choosing powers, you exhaust these points—the ability to breathe fire (burn) costs up to 40 credits on some monsters. If you choose wisely, you can build a frightening creature with unbelievable powers. It's all up to you and your imagination. Now get back to work, go destroy San Francisco. *CC&C* is made for Apple, Atari and VIC-20.

Night Mission Pinball

While it doesn't offer the ability to design your own tables as does the *Pinball Construction Set*, Sublogic's *Night Mission Pinball* does allow the user to change certain elements of the game.

Don't be mistaken, *Night Mission Pinball* is anything but a construction set. It is a pinball game in and of itself. The playfield remains constant, as do the graphics. Upon booting the disk, the game enters an attract mode. You can grab hold of a joystick and start to play right away. The game is great as it is, but you can, however, change the way it plays.

After typing the word FIX on the keyboard, you are presented with a large list of game settings (called parameters). These can be changed, and in effect, the game becomes slightly different. User-adjustable parameters are nothing new, but *Night Mission Pinball* offers an astounding array of 38 parameters. Now that's something to brag about.

A partial list of the parameters includes balls per game, forward incline, free game score, tilt sensitivity, ball speed, bumper impulse and randomizer. Each parameter has a wide range of values—some have up to 256 different settings! With this many parameters and options, it's doubtful that you will become bored with *Night Mission Pinball* in this century, if ever.

Well, there you have it, a slew of programs currently available that allow you to create and modify games without one iota of programming knowledge. Now you don't have an excuse. So get out there and start designing the next *Pac-Man*, *Space Invaders* or *Dragon's Lair*. The future of video games is in your hands. ☐

CONTEST!

CALL (212) 581-8267 AND WIN AN AMDEK COLOR MONITOR!

A good monitor can improve the graphic quality of your games, and Amdek makes the best monitors in the world. Here's what you've got to do to win one. Call the **Computer Games** Hotline. On the tape you will hear the **SOUNDS** of 15 different video or computer games. If you think you can name all 15 games, fill out the coupon below. The reader who names all the games correctly will win a monitor!

Send coupon to: Monitor, **Computer Games Magazine**, 888 7th Ave., New York, NY 10106.

Amdek's Color-1 Plus monitor features a non-glare screen for sharper color display and reduced eyestrain. Graphics and text come across clean, thanks to its 260 × 300 resolution. A headset is included: it may be plugged directly into the front panel compartment, which also contains the adjustment controls. The Color-1 Plus accepts the composite video signals generated by most home computers, and an interface is supplied. For gamers on the go, it even has a built-in carrying handle. If you don't win the contest, you can pick one up for around $449.

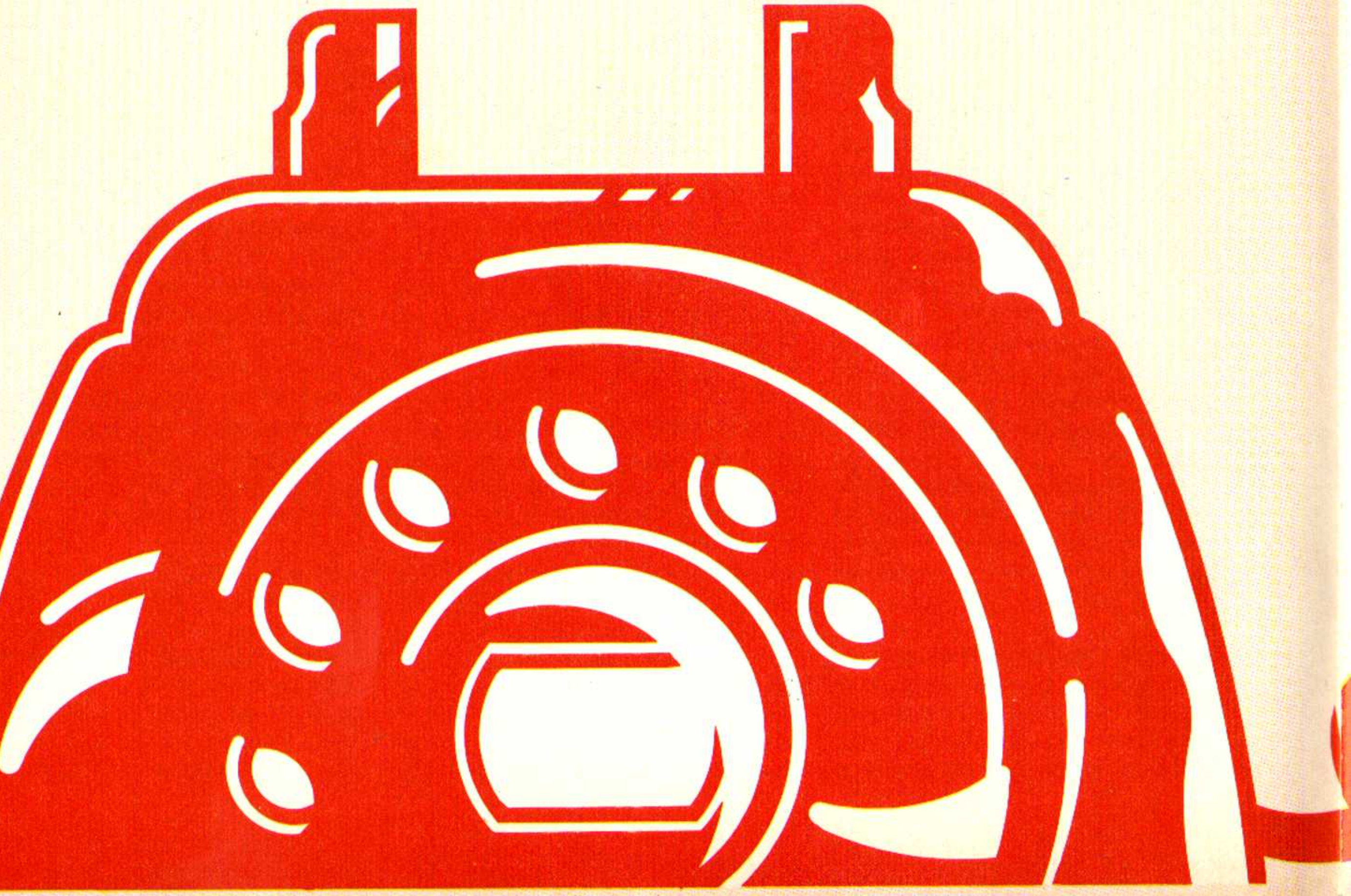


ILLUSTRATION BY DANIEL PELAVIN

I CAN NAME THEM ALL!

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Name____________________

Address____________________

City__________ State__________ Zip__________

One entry per person, please. Entries must be postmarked no later than February 1, 1984. Void where prohibited by law, etc. In case of multiple correct entries, we will randomly select one of them with our in-house computer. Good luck!

SUSPENDED
SUSPENDED
SUSPENDED

"Frooing the mumble" with
the all-text all-stars of adventure games

THE WIZARDS OF INFOCOM

By Shay Addams

FOR MOST PEOPLE, ONE OF THE BIGGEST CONSIDERATIONS about a game is "How good are the graphics?" But one company, Infocom, creates games that are all-text – no pictures whatsoever. Nevertheless, Infocom's incredible adventures have zoomed into the top of the Softsel list, which tracks computer game sales. They actually nailed down half the Top Ten on one chart last summer, a feat that qualifies them as the "Beatles of computer games.'' We visited Infocom's secluded headquarters north of Boston to find out how they develop the richly detailed "universes" that make their all-text adventures such rarified interactive entertainment.

Marc Blank (*Deadline* and *Zork I*) was one of the group's pioneers, along with Stu Galley (*The Witness*), who had been a physicist until he found computers to be more fun. Steve Meretzky started as a game-tester and has now written his first game, *Planetfall*. Science fiction novelist Michael Berlyn (*Suspended*) wrote adventure games such as *Cyborg* for his own outfit, Sentient Software, before joining forces with one of the most formidable bands of gaming programmers on the planet.

CG: Why do you write computer games without graphics?

Berlyn: Home computer graphics right now can't create a picture good enough to convey the kinds of scenes and situations that we need to convey in these stories. They can't draw a scene as well as we can describe it in a paragraph. And when you read the text, you put *yourself* in the story.

CG: That doesn't explain why you seem to trash video games in your ads.

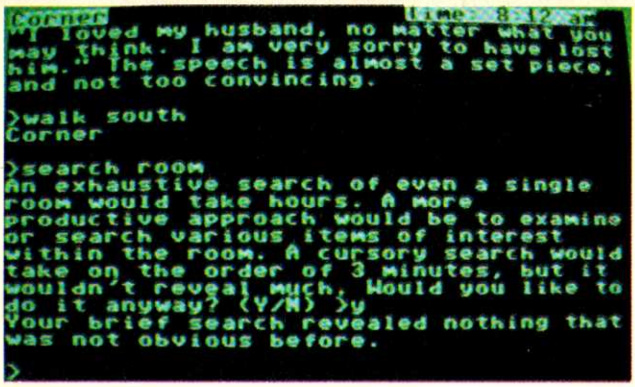
Blank: The ads are a satire of the video game ads. They make a point of saying that sure, we like video games, but that there's something else, there's more than joysticks.

Berlyn: Our attitude toward video games is that they're great. The president of our company (Joel Berez) has a video game console in his home. Mark and I go to the arcades all the time.

CG: What kind of games do you play?

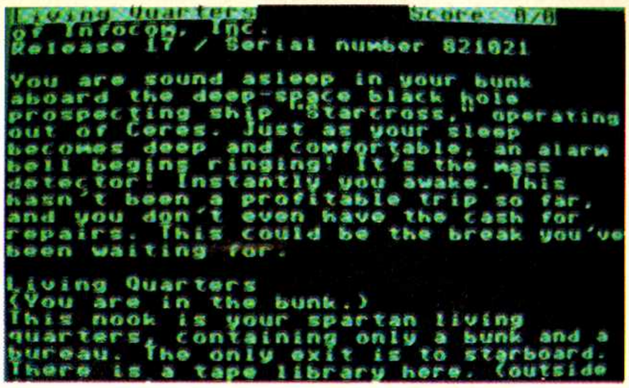
Berlyn: *Q*Bert, Pac-Man, Ms. Pac-Man,*

PHOTOGRAPH BY JOHN GOODMAN



```
Corner                          Time: 8:12 am
"I loved my husband, no matter what you
may think. I am very sorry to have lost
him." The speech is almost a set piece,
and not too convincing.

>walk south
Corner

>search room
An exhaustive search of even a single
room would take hours. A more
productive approach would be to examine
or search various items of interest
within the room. A cursory search would
take on the order of 3 minutes, but it
wouldn't reveal much. Would you like to
do it anyway? (Y/N) >y
Your brief search revealed nothing that
was not obvious before.

>
```

Interrogating Mrs. Robner in* Deadline *elicited this response. You can also question witnesses in* The Witness, *another murder mystery.



```
Living Quarters                Score: 0/0
of Infocom, Inc.
Release 17 / Serial number 821021

You are sound asleep in your bunk
aboard the deep-space black hole
prospecting ship "Starcross," operating
out of Ceres. Just as your sleep
becomes deep and comfortable, an alarm
bell begins ringing! It's the mass
detector! Instantly you awake. This
hasn't been a profitable trip so far,
and you don't even have the cash for
repairs. This could be the break you've
been waiting for.

Living Quarters
(You are in the bunk.)
This nook is your spartan living
quarters, containing only a bunk and a
bureau. The only exit is to starboard.
There is a tape library here. (outside
```

If you're more of a science fiction fanatic than a mystery nut,* Starcross *will launch you into the furthest reaches of outer space.

Tempest. We like a lot of different games. The point is that if people think that that's all there is to computer games, they're missing the boat. We're not necessarily better. We're just saying that there is something different out there. A lot of people don't even *know* about our games, because they end up buying *Zaxxon* or *Frogger* or *Froglifter* or whatever is hot or the salesman knows about.

CG: How did you first get involved in writing prose adventures?

Blank: Everyone who was originally with the company started at MIT, and the original *Zork* was written at MIT in 1977 on a mainframe, the DEC System 10. It was written in response to the original "adventure" game, which we all loved to play. And that game turned into all of *Zork*, about two-thirds of *Zork II* and a little piece of *Zork III.* This wasn't at all a commercial thing—the players were people on computer networks around the country: high school and college students, grad students and even some faculty types who had access.

CG: Why were you studying programming to begin with?

Blank: I never studied programming. I was a life sciences major. That would be biology anywhere else, but at MIT nothing's normal. I happened to work for a term at the lab for computer science, doing a research project. Stu, Al Vezza (Infocom chairman), Joel Berez and Dave Lebling, who wrote the original *Zork*—these people all came from that lab. And my meeting them and working on that really had nothing to do with my undergraduate career. In fact, no one who's writing games for us is trained as a programmer or a computer scientist.

CG: How many people are on staff now, just programming and designing games?

Left to right: Stu Galley, Marc Blank, Steve Mertzky and Michael Berlyn in Infocom's underground computer complex. All their games are written on the massive mainframe behind them.

Blank: Six or seven. They're not all writing, I mean, there are different levels of programming for the games.

Galley: And we have consultants and advisors and directors . . .

Berlyn: Dave Lebling (*Zork II, Starcross* and half of *Enchanter*) functions as a consultant rather than a full-time employee.

CG: What kind of computer do you use?

Blank: All the games are written on our DEC System 20.

CG: And then they're all converted to the other home computers?

Berlyn: We don't do conversions, which is one advantage we have over most software houses. Our games are written in a language that is understood by all the machines. All the machines have an interpreter that understands that language. So there's no conversion.

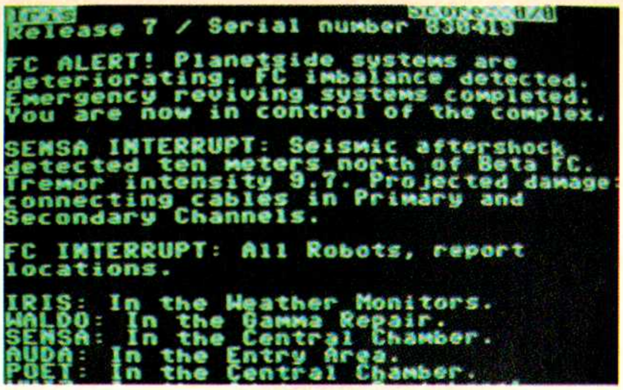
CG: What is so unique about your "proprietary programming tools"?

Berlyn: If we told you, they wouldn't be proprietary.

Galley: The issue is one of complexity. It would be impossible to develop programs this complex using BASIC or assembly language, because they don't have enough structure, enough features, to enable you to handle the problems in parts, to be able to break them down and tackle them one at a time. That's what our proprietary language does.

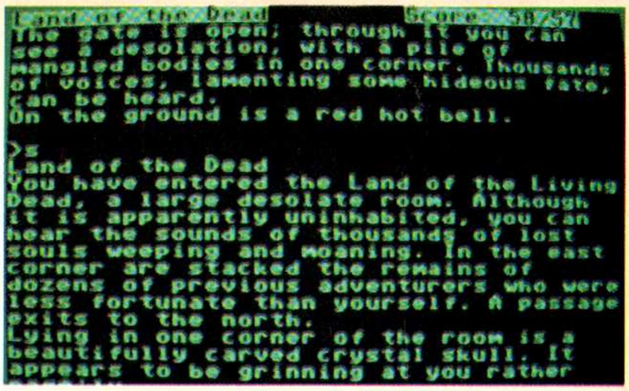
Berlyn: But what's really interesting is that our games can understand complete sentences.

Blank: And it's even deeper than that . . .



```
Iris                                Score: 0/0
Release 7 / Serial number 830419

FC ALERT! Planetside systems are
deteriorating. FC imbalance detected.
Emergency reviving systems completed.
You are now in control of the complex.

SENSA INTERRUPT: Seismic aftershock
detected ten meters north of Beta FC.
Tremor intensity 9.7. Projected damage:
connecting cables in Primary and
Secondary Channels.

FC INTERRUPT: All Robots, report
locations.

IRIS: In the Weather Monitors.
WALDO: In the Gamma Repair.
SENSA: In the Central Chamber.
AUDA: In the Entry Area.
POET: In the Central Chamber.
```

Like giving orders? Wake up and play Suspended, in which you'll have four futuristic robots to boss around. Iris, mop that floor!



```
Land of the Dead                 Score: 58/257
The gate is open; through it you can
see a desolation, with a pile of
mangled bodies in one corner. Thousands
of voices, lamenting some hideous fate,
can be heard.
On the ground is a red hot bell.

>s
Land of the Dead
You have entered the Land of the Living
Dead, a large desolate room. Although
it is apparently uninhabited, you can
hear the sounds of thousands of lost
souls weeping and moaning. In the east
corner are stacked the remains of
dozens of previous adventurers who were
less fortunate than yourself. A passage
exits to the north.
Lying in one corner of the room is a
beautifully carved crystal skull. It
appears to be grinning at you rather
```

Infocom's first game, Zork I has been in the Top Ten for a year. Vividly descriptive prose such as this is only one of the reasons.

the entire level of complexity. I don't think our games are better because of the parser individually, or that they understand more words individually, or that the problems are more complicated individually. I think that it's the whole of it—and it's *all* made possible by the language we use. I mean, just imagine if the language that you use, instead of having FORs and NEXTs (BASIC keywords), had operations that dealt with things like people and objects. And it handled that in a very high-level sense, so you didn't have to spend all your time chasing bits around, but could deal in high-level abstractions. And dealing in those terms is much easier, I mean, there's so many things going on in a game like *Deadline* or *Witness* or actually any of the new games, *Planetfall* and *Suspended,* that you couldn't keep track of them all unless you had a high-level language that was doing it all for you. It would take three to four years to write *Deadline* in machine language, and then you'd only have it running on one computer.

Berlyn: There's just too much detail to keep track of. I mean, it would be a nightmare.

CG: Is it as much fun to write these games as it is to play them?

Meretzky: I think it's more fun writing them than playing them.

Galley: I'd rather do both.

Blank: The actual writing is a lot of fun. For me it's a lot more fun than playing them.

Berlyn: It's a lot more work to write than it is to play them, but you can enjoy making something happen. Like getting Mrs. Robner to stand up and walk around a room, you know, and walk out the door. That can be very exciting. That kind of excitement can transcend any kind of excitement you can get by playing one of these games. Because it's a different kind of satisfaction.

CG: What's the most fun?

Meretzky: The first time you see someone else playing your game.

Berlyn: I agree. That's the most fun.

Blank: It's always a big thrill for me to see it run on a micro as opposed to our mainframe.

CG: When you're first developing a game, do you know exactly what is going to happen from start to finish?

Berlyn: It's closer to writing a novel than a script. You develop characters, you develop an environment, and the problems and the solutions come out of that. But you can't plot a linear path through a complex interactive story. You can certainly plot out a linear path through a puzzle. You may not know exactly when a character's going to get up and walk out of the room and go down to the will reading (in *Deadline*).

Blank: And the will reading happens when they've all arrived. But there's no single piece of code that does that. Each of the characters is to some extent self-motivated. And even *I* don't know when they're going to get there.

Berlyn: So because of that, how can you plot that out in fine detail or even linearly? You can't.

Blank: You can decide what the rules are. It's more like setting up rules than saying exactly what happens.

Meretzky: When Mike wrote *Suspended,* we had no idea whether it was too hard, or even impossible, under the conditions. And after he started playing with it, tweaking the various levels of how bad conditions on the planet began getting and how soon . . .

Berlyn: Up until it had been played ten or twenty times by our game-testers, we had no idea what the best score was. When I play the game to this day, I can finish it. And I can get a decent score, but I'm far from the best score.

Blank: And when you've gotten as good as you can, you can effectively jumble all the parameters and make it even harder on yourself. Like say, "Could I solve this with two robots tied behind my back?"

Meretzky: In fact, the ability to configure the robots was one of the last things that was added.

Galley: We also think up puzzles or scenes, elements that could eventually go into a game, and we keep track of them on the backs of envelopes and so on. And when we get serious about developing an actual product, then we have to decide what the goal is, how we expect a player to get there, what kinds of difficulties, what the whole feeling will be like.

Blank: It's not as if someone sits down at the beginning and says, "This is the way everything fits in, and I think it works better that way."

Berlyn: Nobody can sit down and write one of these as if they were writing a novel. They are *too* interactive and they are too *complex.* Take it from someone who's done both. It can't be done.

Blank: And it's because the main character in the story you're writing is not you—it's the people who play it. And *they* have to tell you what makes it a better story.

CG: Have you ever written any games that were never released?

Meretzky: We have so many ideas for potential games that we sort of do the weeding out before we start working.

Blank: It's not like everyone here is in a vacuum, where someone submits something and we say, well, that's okay.

Berlyn: That's the critical difference—

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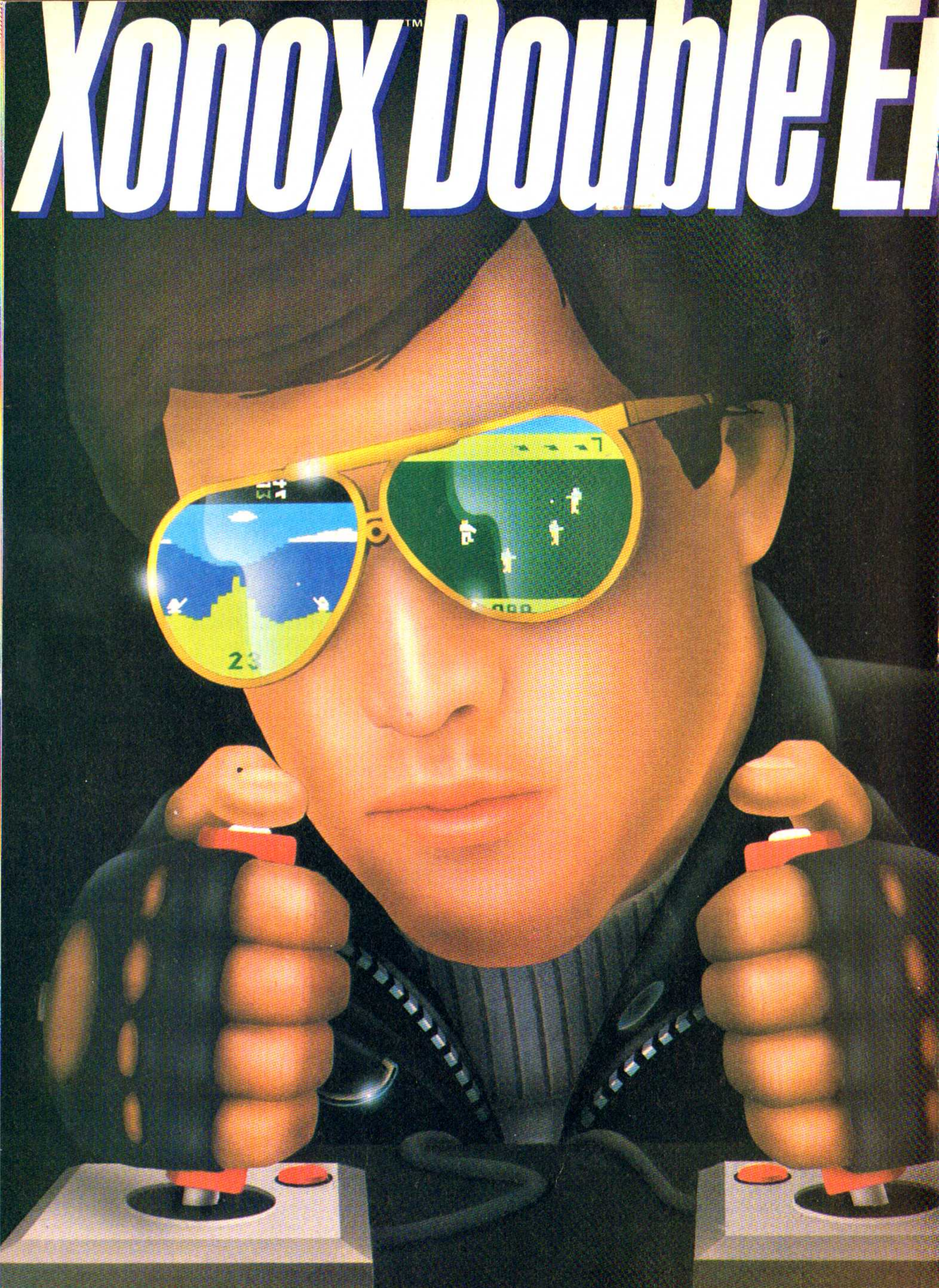
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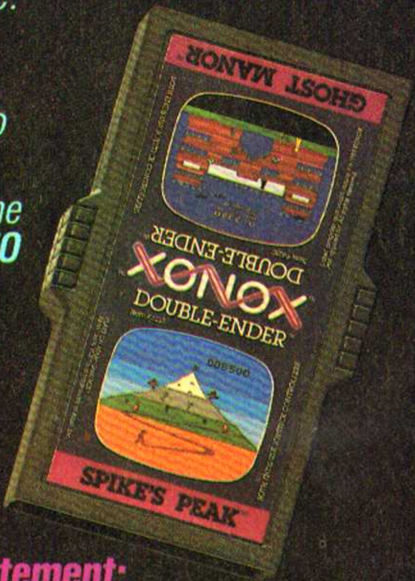

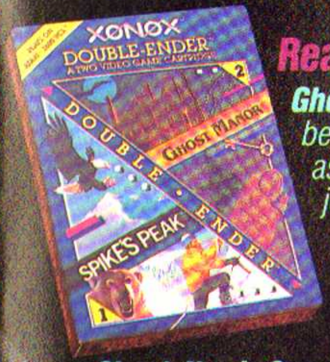

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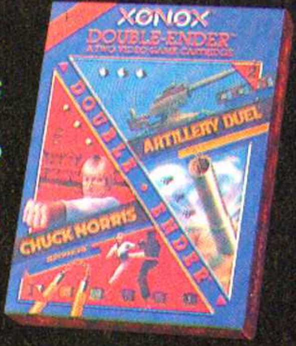

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30 SECRETS OF ATARI

The real story of Asteroids, Space Invaders, Pac-Man Pong, and Pole Position

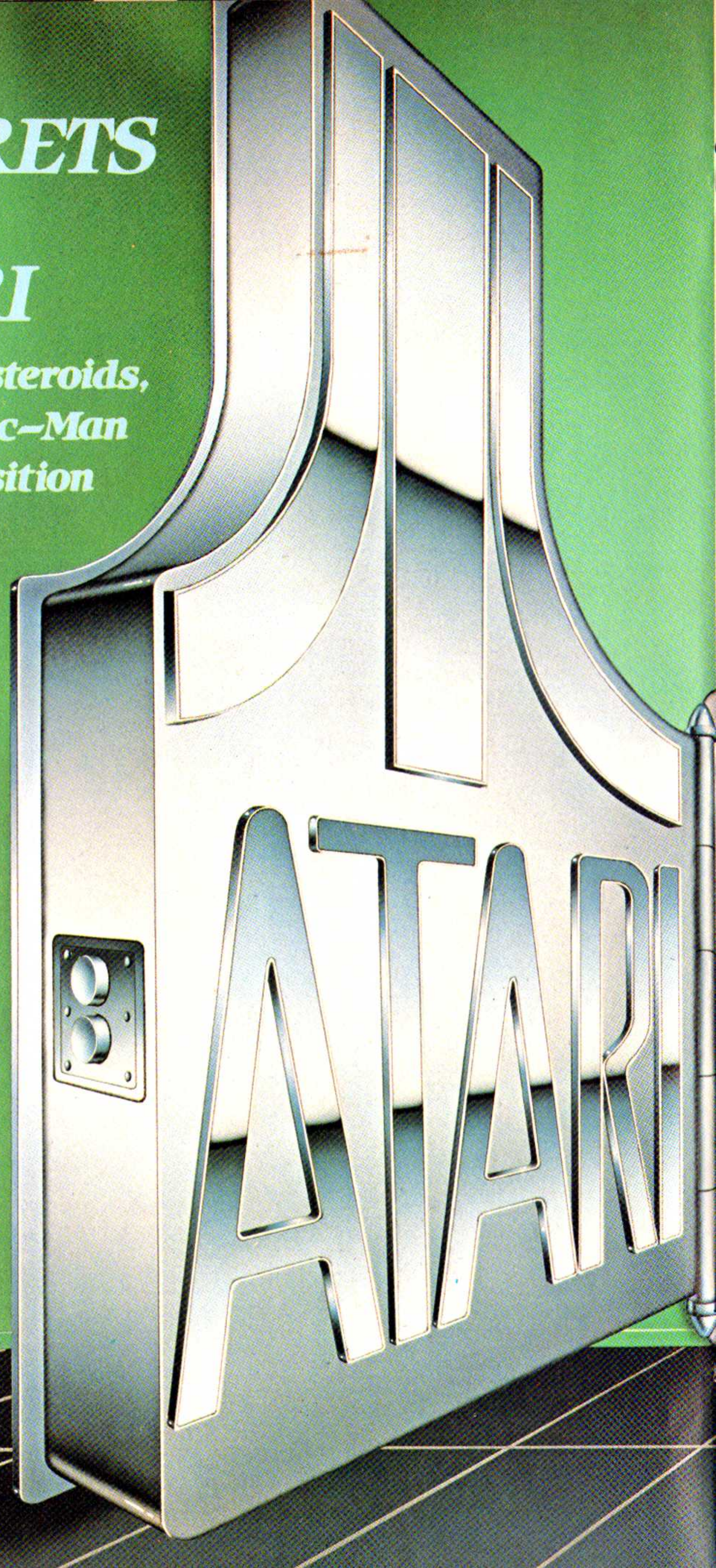
By Steve Bloom

In its 11-year history, Atari has become one of the biggest, flashiest, most influential companies in history. They have had their share of incredible successes and embarrassing failures. Perhaps more than anything else, they have had their secrets.

Atari is very tight-lipped. At one point, employees were asked to sign confidentiality agreements and had to use magnetic ID cards to walk through the company corridors. Aside from the actual cartridges, the public learns little about Atari's games and the people who create them.

Until now. We have interviewed dozens of employees of the company, past and present. We have guaranteed them complete anonymity in exchange for a tip, an insight, a never-before-heard anecdote. From these interviews we have compiled the following secrets of Atari, which are published here for the first time.

ILLUSTRATION BY ROBERT BURGER



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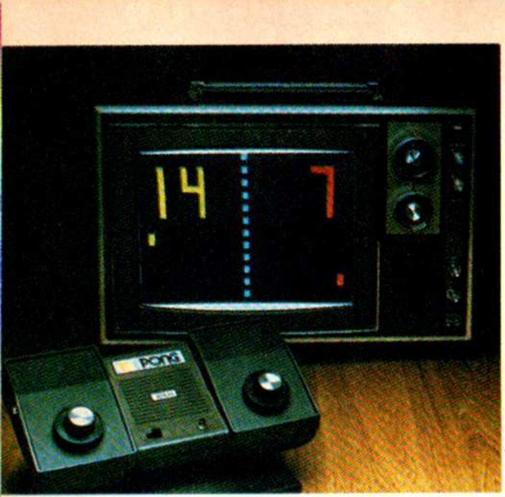


Pong comes home

1

Nolan Bushnell, Atari's founding father, originally named the company Syzygy (the sun, moon and earth in total eclipse). He renamed it Atari because another company already owned the name Syzygy.

2

Bushnell is generally believed to be the author of *Pong*, Atari's first game. Actually, Magnavox released the Odyssey 100, the first home video game system, which included a game remarkably similar to *Pong*, several months before *Pong*'s debut in the arcades in 1972. Years later Bushnell admitted in court that he had seen an Odyssey prototype on display earlier in 1972. The Odyssey 100 was invented by Ralph Baer.

3

Bally/Midway rejected Bushnell's *Pong* when he demonstrated the game in its Chicago offices in 1972. Bushnell went back to California and started Atari.

Pole Position

4

Given a choice between *Mappy* and *Pole Position*, two arcade creations by the Japanese firm Namco, Bally/Midway amazingly opted for *Mappy*. Atari had to settle for *Pole Position*, which went on to become the biggest game of 1983.

5

Gravitar was one of Atari's worst-selling arcade games. So they took the game program out of the cabinets and converted them all into *Black Widow*.

6

Mike Hally designed *Gravitar*. He recently redeemed himself as the project leader for Atari's spectacular *Star Wars* game.

7

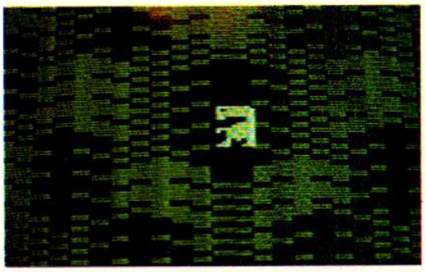
Rick Mauer never programmed another game for Atari after he did *Space Invaders* for the VCS. He is said to have earned only $11,000 for a cartridge that grossed more than $100 million.

8

Todd Fry, on the other hand, has collected close to $1 million in royalties for his widely criticized VCS *Pac-Man*.

9

The man responsible for bringing *Pac-Man* to Atari—Joe Robbins, former president of coin-op—was severely reprimanded by the chairman of the board Ray Kassar for making the deal with Namco without consulting him. It seems Robbins was in Japan negotiating a legal matter with Namco at the time, and Namco apparently demanded that Atari buy the home rights to *Pac-Man* as part of the settlement. *Pac-Man* had yet to take off, but when it did, Robbins' gutsy decision paid off as *Pac-Man* went on to become the company's best-selling cartridge ever.



E.T.

10

The man responsible for bringing *E.T.* to Atari? None other than Warner Communications' chairman Steve Ross. So convinced was he that *E.T.* possessed video game star quality, Ross paid Steven Spielberg an enormous sum (did I hear $21 million?) for the rights to the little extraterrestrial bugger. Designer Howie Warshaw spun the game out in four months, only three million cartridges were sold and Atari soon began announcing million dollar losses. *E.T.* is now selling for as little as $5 in some stores.

Howard Warshaw

11

Warshaw also designed the *Raiders of the Lost Ark* cartridge and *Yar's Revenge*, which started out as a licensed version of the arcade game, *Star Castle*. "Yar" is "Ray" Kassar backwards.

12

One of Atari's most popular early arcade games was *Tank*, only it didn't say Atari anywhere on the cabinet or screen. Instead, it said "Kee Games," which was another name for Atari from 1973-78. Atari and Kee (named after Joe Keenan, Bushnell's longtime partner) put out identical games in order to create more business for Atari. For instance, *Spike* (Kee) and *Rebound* (Atari) were volleyball games that came out a month apart in 1974.

13

Tank was designed by Steve Bristow, who is still with the company after all these years. Most recently he has been in charge of Ataritel, Atari's telecommunications project which had been code-named, "Falcon."

14

Code-names have always been popular at Atari. The VCS was "Stella," the 400 computer was "Candy," the 800 was "Coleen," the 5200 was "Pam." All were named after well-endowed female employees working at Atari (except for Stella, which was a bicycle trade name).

15

And then there was "Sylvia," the 5200 that never was. Pam, as everyone by now knows, was a stripped down 400 computer for the sole purpose of game playing. Sylvia was intended to be Atari's answer to Intellivision and was in the works long before Pam was born. But problems developed largely because the 5200 was projected to be compatible with VCS software, which limited the design of the new hardware. When push finally came to shove, Sylvia went out the window and Pam walked in the door.

Holographic video games?

16

Cosmos, Atari's experiment with holography, was a battery-operated game system that was introduced at a New York press conference in the spring of 1980. Created by Al Alcorn, Cosmos was never to be seen again.

17

Alcorn was the first engineer hired by Nolan Bushnell. His first project was *Pong*. His second project was *Space Race*, the forerunner to *Frogger*.

18

Another project announced was a remote-control VCS. Since it was wireless, you could play games at 30 feet without having to hassle with the console. It too mysteriously disappeared from Atari's catalogue. (Note: it looked almost exactly like the Atari 5200.)

Remote-control VCS

Dig Dug

19

Nobody in Atari coin-op liked *Dig Dug*, the company's first Japanese import, except for Brian McGhie, now with Starpath. It was McGhie who added the finishing touches to *Dig Dug*. His latest game is *Rabbit Transit*.

20

Quantum and *Food Fight* were not designed by Atari. They were the work of General Computer Corp. of Cambridge, Massachusetts. GCC broke into the business selling kits that would speed-up *Missile Command*. Atari sued and settled with GCC for the above-mentioned games.

21

Tempest was originally intended to be a first-person *Space Invaders*-type game. Then Dave Theurer came up with the idea for tubes on the screen. Theurer also designed *Missile Command*.

22

The first 200 *Asteroid* machines were actually *Lunar Landers*. Atari was so hot on *Asteroids* that it cut short the production run on *Lunar Lander*—Atari's first vector game—and released the 200 complete with *Lunar Lander* cabinet art.

23

Asteroids had two incarnations before it achieved its spectacular success. The first, *Planet Grab*, simply required you to claim planets by touching them with your spaceship. The second version, *Cosmos*, allowed you to blow up the planets and duel with another ship, *Space Wars*-style. Only in *Asteroids*, which came along two years later, did Atari engineer Lyle Rains introduce the concept of floating rocks.

24

Many at Atari, past and present, dispute Rains' claim that he was solely responsible for *Asteroids*. Ed Logg, who programmed it and who also had his hand in the design of *Centipede* and *Millipede*, is said to be the true mastermind behind *Asteroids*.

25

One of Ed Logg's games that has never been released in the arcades is called *Maze Invaders*.

26

Battlezone programmer Ed Rotberg left Atari after he was forced to convert his favorite game to Army specifications. Dubbed the MK-60 by the Army, it included 30 game variations, improved steering and magnification, and simulations of Russian and American tanks. It sold for $30,000.

27

Rotberg joined two other Atari engineers, Howard Delman and Roger Hector, and formed Videa, which not too long ago was bought by Nolan Bushnell for more than $1 million and renamed Sente Technologies.

28

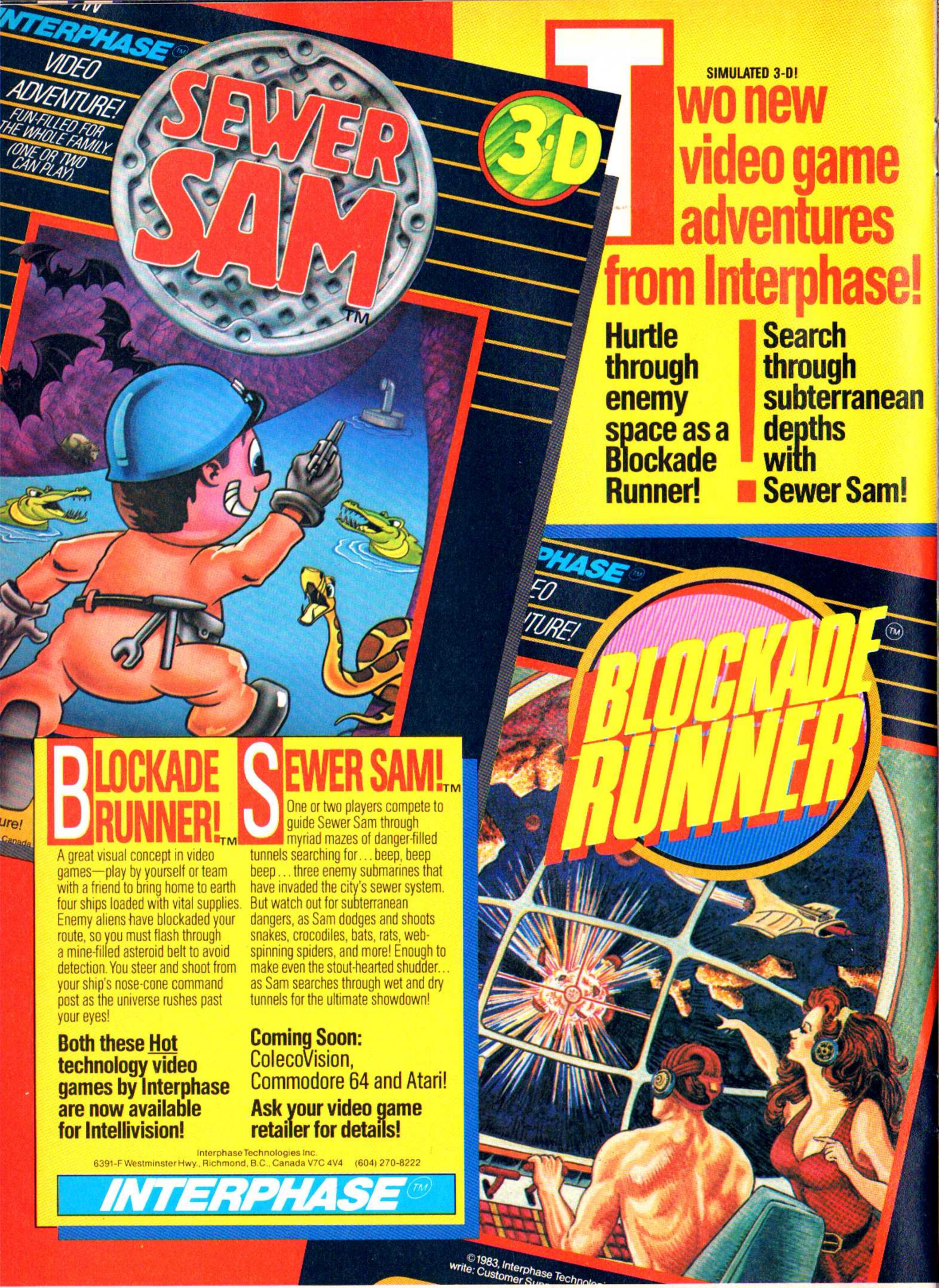
President of Apple Computers Steve Jobs began his high-tech career at Atari. He was known to walk around barefoot, kick up his dirty feet on executives' desks, and talk continuously about going to India to meet a guru. Not only did he do the latter, he designed *Breakout* before leaving Atari for good.

29

Before they left Atari, designers Al Miller, David Crane, Larry Kaplan and Bob Whitehead were working on games that would later become Activision cartridges. Crane's *Dragster* was a spin-off of the Atari coin-op *Drag Race* and Kaplan's *Kaboom* was based on the Atari coin-op *Avalanche*.

30

Warren Robinett, tired of Atari's policy of no author credit for game designers, decided to sign his game, *Adventure*, in an obscure secret room in the program. He never even told his fellow designers about this for fear of word getting out and he being reprimanded. Ultimately, a 12-year-old boy in Salt Lake City discovered the secret room where it was written: "*Created by Warren Robinett*." To his surprise, Robinett was never punished. He too left Atari shortly thereafter.



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Every game room has its own "big guns" or "in-house pros." They are players whose initials you see on most of the games in the arcade. If you've ever watched a good player, you will probably notice his strategy as well as his knack for coaxing the controls to respond in a crisis. What you *don't* see are the fail-safes these video jocks turn to in situations where death seems unavoidable.

Let's see how *you* respond when the pressure is on. Here is a life and death situation. Your very existence is in peril. Can you survive?

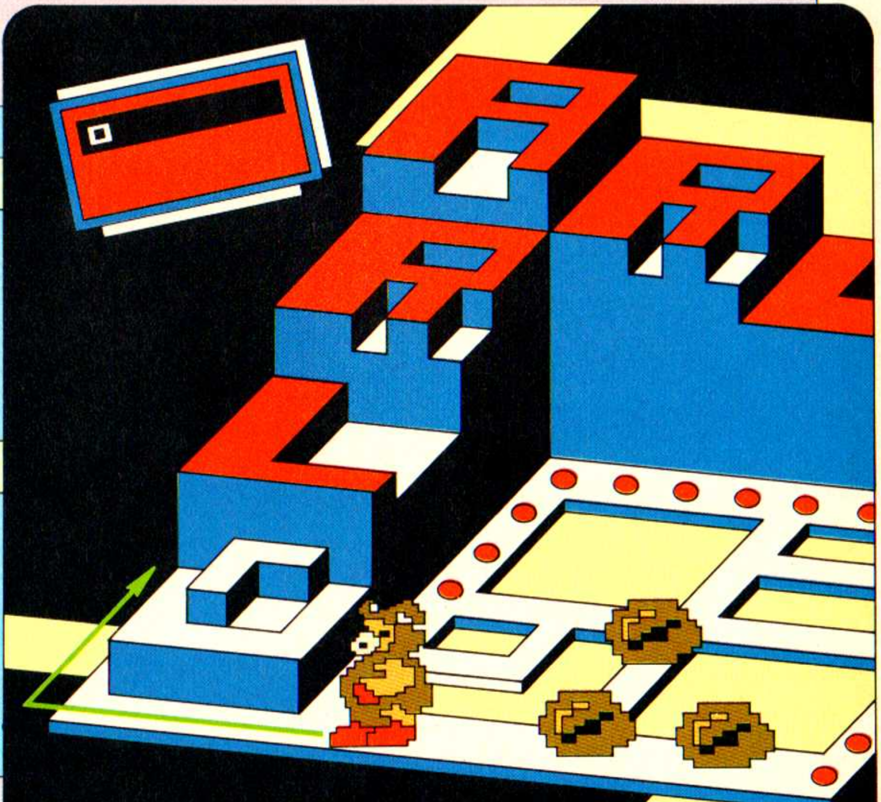
CRYSTAL CASTLES

THE CRISIS . . .

Your best friend has bet you your life savings in quarters that he can beat you in *Crystal Castles*. You've never even played the game! Isn't there some trick that will score a lot of points for you right away?

YOUR SOLUTION . . .

Yes. Even the worst player in the world can get 140,000 points by following this simple tip: on wave one, run around the left side to the *back* of the structure and hit the jump button. It's as simple as that—you're 140,000 points richer!



ILLUSTRATIONS BY NINA WALLACE

BEAT IT! DRAGON'S LAIR

By Bill Kuhn

The key to success in a laserdisc game is split-second timing. Most of the time, while Dirk is fighting, running or jumping, the joystick doesn't do anything. Only when the controls make a distinctive beep through the right speaker are they actually activating the action. Often you'll see a flash of light in the doorway or on an object. This tells you *when* to move but not necessarily the direction. I have counted 29 different situations in *Dragon's Lair*. Many of these are repeated and some will be mirror images of other situations. The following is a list of the situations and what you should do in each . . .

> **The best time to move is when the lizard raises his right leg, just as Dirk lands with both feet. If you do it too early, you'll run into the wall.**

1. Hole in the wall—Simply push forward on the joystick.

2. Water-ride—As the light flashes in the tunnel, push the joystick in that direction. When you reach the rapids, you can either go right or left, or be daring and push forward just as Dirk's barrel floats into the lighter colored stream. Then just push away from the whirlpools. When he crashes and flies in the air, grab the chain as it flashes. You can either push right or forward.

3. Swinging ropes—If Dirk is facing to the right, push to the right as the first rope swings toward him. Listen for the sound of creaking to stop, center to the screen, then go. When the mirror image of this sequence comes up, wait until you see the palm of his hand to make your move.

4. "Drink Me"—Go right at the flash.

5. Falling rocks—Go right at the flash.

6. Wind tunnel—Go right at the flash.

7. Skulls and skeletons—When the skulls fall out of the doorway, you should be pushing forward. It may be hard to hear the beep through the background noise, so keep pushing until you're sure Dirk is through. Push the sword button and then, as the tar is closing in, go into the next room and use the sword button to kill the ghosts.

8. Collapsing steps—Wait until Dirk starts to slip, then go left. Be ready to use the sword as he kills those wormy eyeballs! Then go quickly left and left again when the chain flashes.

9. Moving floor—As the tile on the right opens and flashes, move back quickly. As he spreads his legs and there is another flash, go forward. Then everything will flash. Just go left and you'll make it.

10. The Lizard King—Move either forward or left. Then make a series of rights. The best time to move is when the lizard raises his right leg, just as Dirk lands with both feet. If you do it too early, you'll run into the wall. If you do it too late, you'll get bopped!

11. Black knight on horse—As the briars flash, move left, left again, then right . . . each time you see the flash.

12. The pool room—This one is a little rough. Just remember to watch for which side Dirk's sword hangs on. That will be the direction to move first. Then go forward, toward the middle, forward, away from the wormy creatures, and forward as he steps on the loose block. Now, as he looks up, use the sword button to kill the spider. Then go back toward the middle and forward as the door opens. Whew!

13. Knight robot with electric sword—If Dirk is on the left side of the screen, wait until the knight hits the floor twice, then move left. When he hits it twice more, go right. You'll notice that the electricity takes up three sides of the tile that Dirk is standing on. This is a good time to move. Go forward, and on the second step go back to the left. Wait a second for the electricity to surround you, then move to the right. Go to the left and then to the right even before Dirk lands. Go right again, then as he jumps forward, hit the sword button and enjoy your victory. (The mirror image of this one is exactly the same moves, only reversed.)

14. Electric floor in throne room—Wait for the top view. Quickly go to the right, forward, then right again. After the throne turns, wait for the front view, then go right again.

15. Flying swords—Just as the sword moves downward, hit the sword button. The same goes for the ball and chain. As the anvil flies toward Dirk, move to the next screen (away from the flames). After the spear is drawn, hit the sword button. Wait until the stone creature moves and when Dirk opens his mouth, hit the sword.

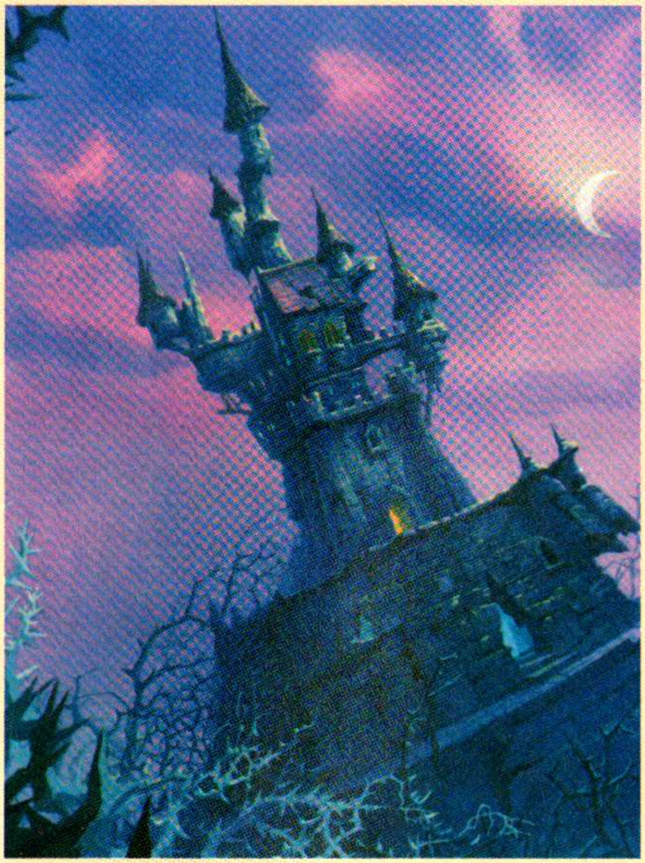
16. Lava people—As Dirk is surrounded, use the sword button. It won't work, but after he's surrounded again he'll slip out and it's just a matter of five forward moves.

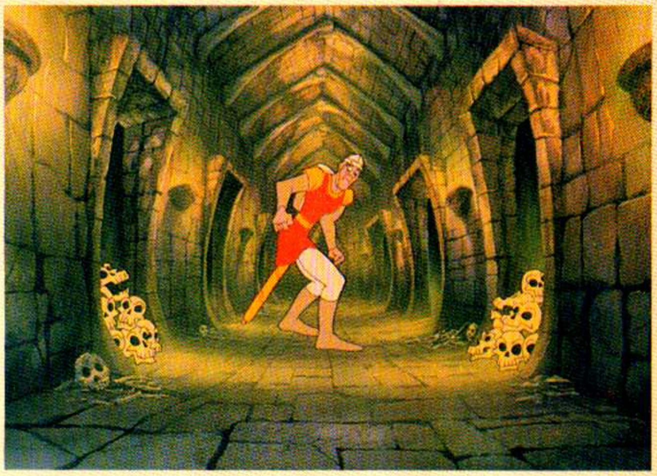
17. People ghost—Right after his second breath, move forward. Hit the sword, go back, then forward.

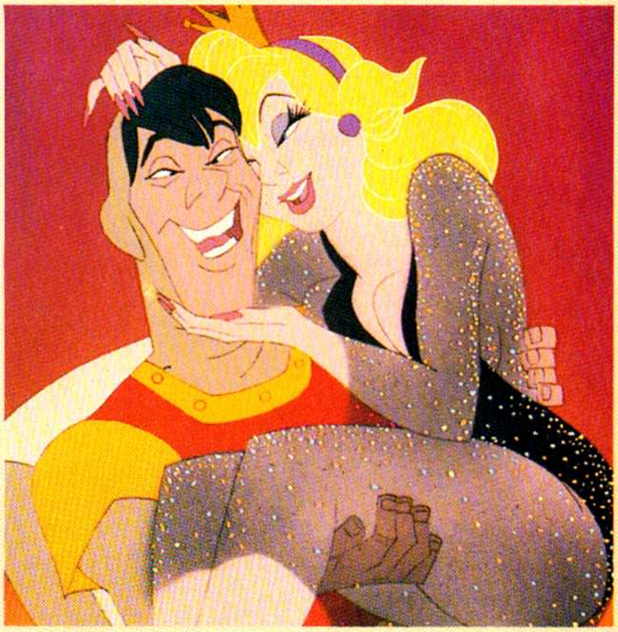
18. Bubbling pot—When the green stuff oozes out, go forward, hit sword, go back, hit sword and go to the right.

19. Octopus legs—As the tail drops, use the sword button. Then go forward at the flash and right when the door flashes. Go right when the steps flash and left when the bench flashes. Go forward when the door slams for the first time after Dirk lands on the bench.

20. Elevator shaft—If you miss the first level, get off at the







A few of the scenes from Dragon's Lair, the first laserdisc video game. These animated segments are recorded in millions of tiny "micropits" beneath the surface of the disc. A laser "reads" the disc and displays the picture on the monitor. When you move the joystick, the arm holding the laser beam moves to another part of the disc, putting Dirk Daring in a new, perilous situation.

second or third.

21. Giddy goons—Hit the sword first, then go right and forward up the steps. Kill both goons, go forward.

22. Bowling ball—As the smaller balls roll past Dirk, pull back on the stick. After the purple ball, you'll want to go forward to get over the hole.

23. Snakes—Hit the sword button for each of the three snakes, then go forward to grab for the rope.

24. Flying horses—If the horse is facing left, your first move is to the right. After the fourth burst of fire, the next two moves are the same direction. Just move away from the fire on the wall. The mirror image is just reversed.

25. Lightning bolts—When the fire starts, move right. That will make Dirk jump back. The rest of the moves are easy: go left on each fire bolt.

26. Electric gate—As the gate comes down, move forward. Move forward again after the doors close. When Dirk gets to the bridge, he'll turn his head back. Go left.

27. Bats on ledge—Go forward, and as the ledge collapses, go forward again. Use the sword to kill the bats, then go right. The second he lands, go right again.

28. Bats on steps—Use the sword button first, then go left as the steps collapse. Go forward, hit the sword button for the giant bat, then go left.

29. Dragon's Lair—You finally made it. Don't get too excited, you have plenty of time. Wait for the scene with the stack of treasures behind Dirk. When they flash, go left, and go left again to avoid the dragon's fire. When more treasures flash, go left again. Now get ready for an exciting chase scene. After the princess points toward the magic sword, Dirk runs and hides behind a column. As the dragon tries to grab him, pull back. He'll run behind another column. Pull back again. When you see the magic sword, go right twice. Use the sword against the dragon's fiery breath. Jump to the left to avoid the tail and use the sword button to throw the sword deep into the dragon's heart. Take a deep sigh and relax. You're a hero!

MINIMUM SCORE POTENTIAL: 300,000

BEAT IT!

MILLIPEDE

By Bob Guerra

Using a trackball and single fire button, the object of *Millipede* is to rack up as many points as possible while defending your gun against swarms of invading insects. These include spiders, mosquitoes, bees, earwigs, beetles, inchworms and, of course, millipedes. Each enemy has its own modus operandi and function in the game. For example, bees drop down from the top of the screen, leaving behind mushrooms. Earwigs cross the screen, poisoning any mushrooms they touch. When a millipede segment hits a poisoned mushroom, it drops rapidly to the bottom of the screen.

Also at your disposal are a number of DDT bombs. When you shoot a DDT bomb, it releases a cloud of smoke. Any insect that enters this cloud is destroyed and you will receive triple its point value.

Of the seven creatures you'll encounter in *Millipede*, only one, the inchworm, is harmless. In fact, shooting it slows the game down considerably for several seconds, allowing you to eliminate any millipede segments that are dangerously close to the bottom of the screen, or giving you a chance to clear the area of mushrooms.

Each insect in *Millipede* has its own distinctive sound, and two that you should learn to recognize are the earwig and the inchworm.

SCORING

MILLIPEDE (100/head, 10/body segment). Weaves its way from the top of the screen to the bottom of the playfield. Each time it hits a mushroom, it drops down one row.

MUSHROOM (1). Requires three hits to destroy.

SPIDER (300, 600, 900 or 1200). The closer it is to your gun when shot, the more it's worth. Never backtracks. Eliminates any mushrooms it touches.

BEE (200). Attacks singly and in swarms. Point values increase when in swarms. Requires two hits to destroy. First hit causes it to fall twice as fast.

BEETLE (300). Enters from the side, near the bottom of the screen. Crawls slowly along the base of the screen before heading straight up. Turns every mushroom it touches into an indestructible flower.

MOSQUITO (400). Also attacks singly and in swarms. Flies diagonally toward the bottom. If it hits the side of the screen, it bounces off in a reverse diagonal similar to the balls in *Super Breakout*.

DRAGONFLY (500). Moves from side to side as it floats to the bottom of the screen. Leaves mushrooms scattered behind. Will also attack in swarms.

EARWIG (1000). Poisons mushrooms as it moves horizontally.

STRATEGIES

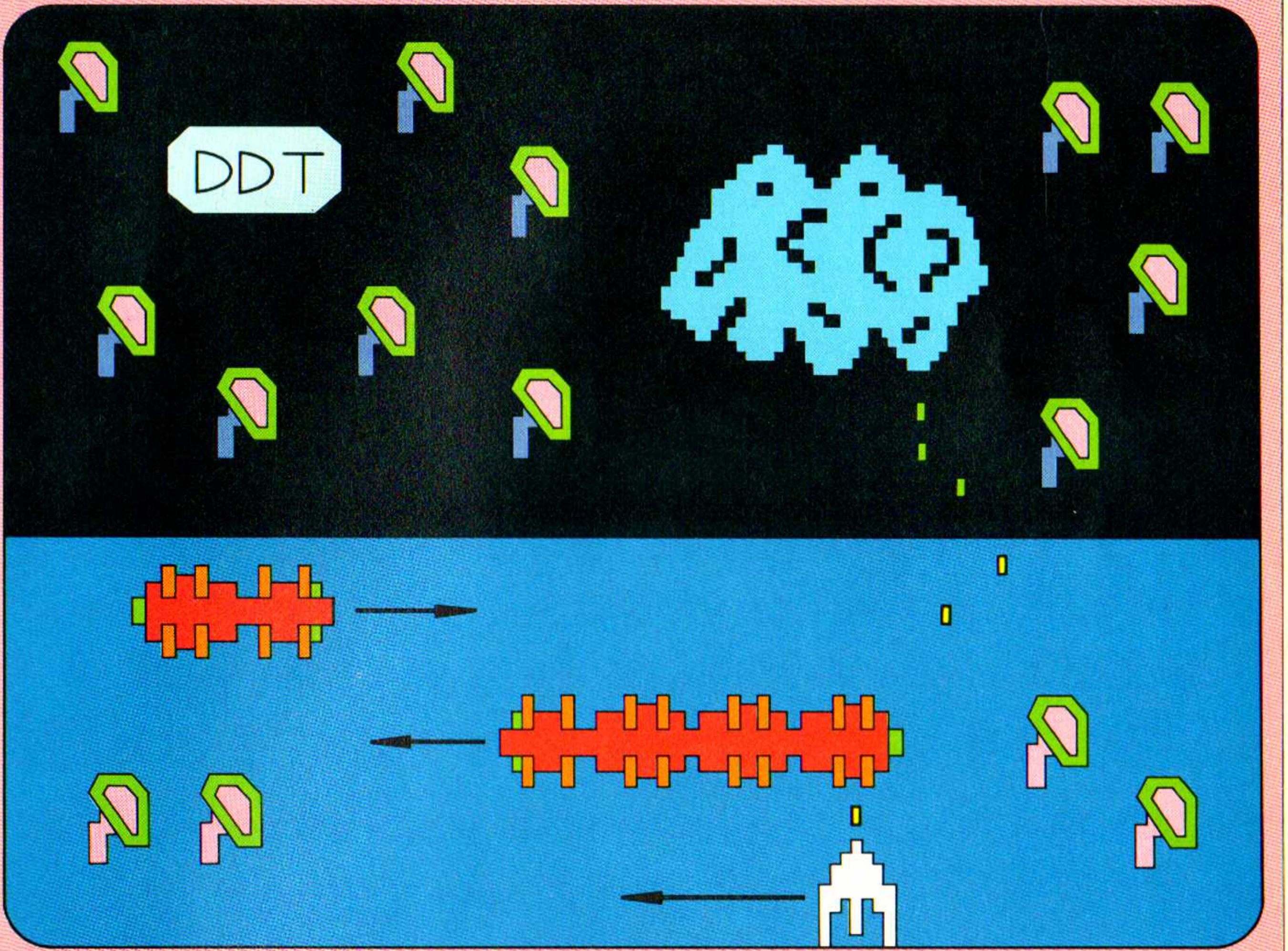
Early video games allowed you to devote all your attention to a single task. *Millipede* forces you to divide your concentration among several jobs. First you must keep your firing zone clear of mushrooms. This will give your gun more maneuverability (it can't pass through mushrooms) and slow the millipede's descent. Since spiders eliminate any mushrooms they touch, it sometimes works to your advantage to let one pass by unharmed. Also try to shoot descending bees before they reach the firing zone. This will prevent them from leaving mushrooms at the bottom of the screen.

Next you must defend your gun against insect attacks. Posing an almost constant threat are the spiders. Because they enter from the sides, you should stay close to the center when there are no spiders on-screen. Occasionally a spider can be eliminated by using a low DDT bomb. Simply wait until the spider is approaching the bomb on a high bounce, then shoot the bomb. You will receive 2600 points—800 for the bomb and 1800 for the spider.

The beetle is another persistent adversary. If you spot one when it enters the screen, kill it. The entire screen will scroll down one row, bringing low mushrooms into the firing zone. Eliminate them. If the beetle reaches the bottom, move your gun up and out of its way. When the beetle begins its ascent, slide under it and blast it before it touches any mushrooms. Once a mushroom becomes an indestructible flower, it can't be shot away.

Mosquitoes and dragonflies usually pose little problem if you time your shots carefully and remember that a mosquito will bounce off the side at the same angle he hits it. Swarms of either insect, however, can be tricky. During a mosquito attack, try to remain stationary at the bottom center of the screen. Move only to avoid a direct hit. When it's raining dragonflies, move your gun back and forth slightly to kill as many as possible. Tapping the fire button to shoot will prove more accurate than holding it down.

Each insect in *Millipede* has its own distinctive sound, and two you should learn to recognize are the earwig and inchworm. Since they only cross the upper portion of the playfield, they may pass by unnoticed if you rely on your vision. Remember, blasting earwigs will not only boost your score, it will prevent the poisoning of mushrooms. This, in turn, will keep the millipede from plummeting to the bottom.



Rather than aiming for the millipede's head, start at the tail and fire continuously as you slide the gun below it in the same direction it's traveling. In this way you'll be able to kill several segments at once. If you try this in reverse (beginning at the head), the mushrooms you create by the initial hits will cause the remainder of the millipede to descend toward your gun.

Finally, we come to the star of the game, the millipede. Since shooting a millipede in the middle will result in his splitting into two segments, aim for his head. When shot, millipede segments become mushrooms. The millipede will wiggle straight down between two closely-spaced vertical rows of mushrooms if it enters at the top. This can work to your advantage if you fire between the mushrooms as the millipede is on its way down. Don't waste too much time trying to set up this pattern by shooting out specific rows of mushrooms. Frequent bee and dragonfly attacks will quickly replenish the mushrooms you've so carefully shot away.

If you have any spare time, clear a path to each of the DDT bombs. Once there are several mushrooms between you and the bombs, they become almost useless. Since DDT bombs are also useful during bee swarms, mosquito attacks and dragonfly raids, don't be afraid to use them. After each millipede is destroyed, you get new bombs.

When millipede segments start to reach the bottom of the screen, single segments will begin to enter the game from the sides of the firing zone. At this point you'll have to carefully maneuver your gun over millipedes traveling along the bottom, while shooting those up above. As soon as the bottom row is clear, move your gun back down and try to finish off those segments still on their way down. Timing and aim are critical.

Inevitably, the millipede and his friends will manage to take a game life, but when this happens look on the bright side. The poisoned mushrooms will disappear. and the indestructible flowers will self-destruct.

MINIMUM SCORE POTENTIAL: 70,000

BEAT IT!

GYRUSS

By Bob Guerra

Gyruss is sort of like *Galaga* in the round. You've got aliens flying in formation, chance stages when the aliens don't fire at all, and the opportunity to double your firepower. This time, however, there are no tractor beams or ship-surrendering sequences to learn. Simply shoot the orange ball which appears after all five sets of enemies have entered the screen. The trick is to be in the right place at the right time.

> **Position your ship in the lower left and hit the front of the pack. The formation will loop around that spot, allowing you to destroy it**

SCORING

Red and blue ships are worth 100 points and 50 after they're in formation. The last ship is 1000 points. If you destroy every ship in a group before they fly into formation, you receive 1000 for the first group, 1500 for the second, etc. The orange double-fire ball is worth 500. When it appears, it is flanked by two blue satellites. The first is worth 1000, the second, 1500. Occasionally, two small rockets will fly to the edge of the screen with a force field between them. The rockets are 200 apiece, and shooting either will eliminate the force field.

During each chance stage you will face four groups of ten enemies. Each is worth 100 points. Eliminating a complete group earns 1000 during the first chance, 1500 during the second, and so forth. If you wipe out all forty enemies, you receive a 10,000 point bonus.

TWO WARPS TO NEPTUNE

The first group of ships forms in the middle and comes straight down the screen. They will fire yellow missiles toward you. Hold your ground until the last second before dodging out of the missiles' way. Any ships you miss will curve around toward the middle of the screen.

The second group flies toward the bottom right. Group three goes to the bottom left, and the fourth group heads for the top of the screen. Unless you eliminate all four groups, a fifth will appear in a random pattern. Stay near the bottom, determine where it's headed and move into position.

Next, the orange double-fire ball will appear. Just before it does, three sets of small red lines will appear. Line up your ship with the two red lines in the middle. Since this is where the ball will appear, you can blast it as soon as it materializes. Then destroy the satellites on each side.

When you reach the chance stage, the first group consists of two rows which overlap at 12 o'clock, curve around to six o'clock, and then head back upward. The second group flies up from the lower left, so shoot them from 7 o'clock. Group three is similar to group one but starts at the bottom. The final group is easily eliminated by positioning your ship at 7 o'clock.

THREE WARPS TO URANUS

Group one swirls in from the middle left. Position your ship in the lower left and hit the front of the pack. When you do, the formation will loop around at that spot, allowing you to destroy them all without much movement. The second group is identical, but enters on the right. Groups three and four enter from the top left and right respectively, and behave almost identically to the first two. Again, the fifth group is random, so be on your toes.

The chance stage begins with ten aliens flying onto the left side in two rows of five. The lower row should be eliminated first, by shooting from 7 or 8 o'clock. Then move up slightly to blast the second row, which turns near the top left and curves down. Group three is the same, but starts on the right. Both rows will circle the screen twice, so don't bother chasing the second row.

THREE WARPS TO SATURN

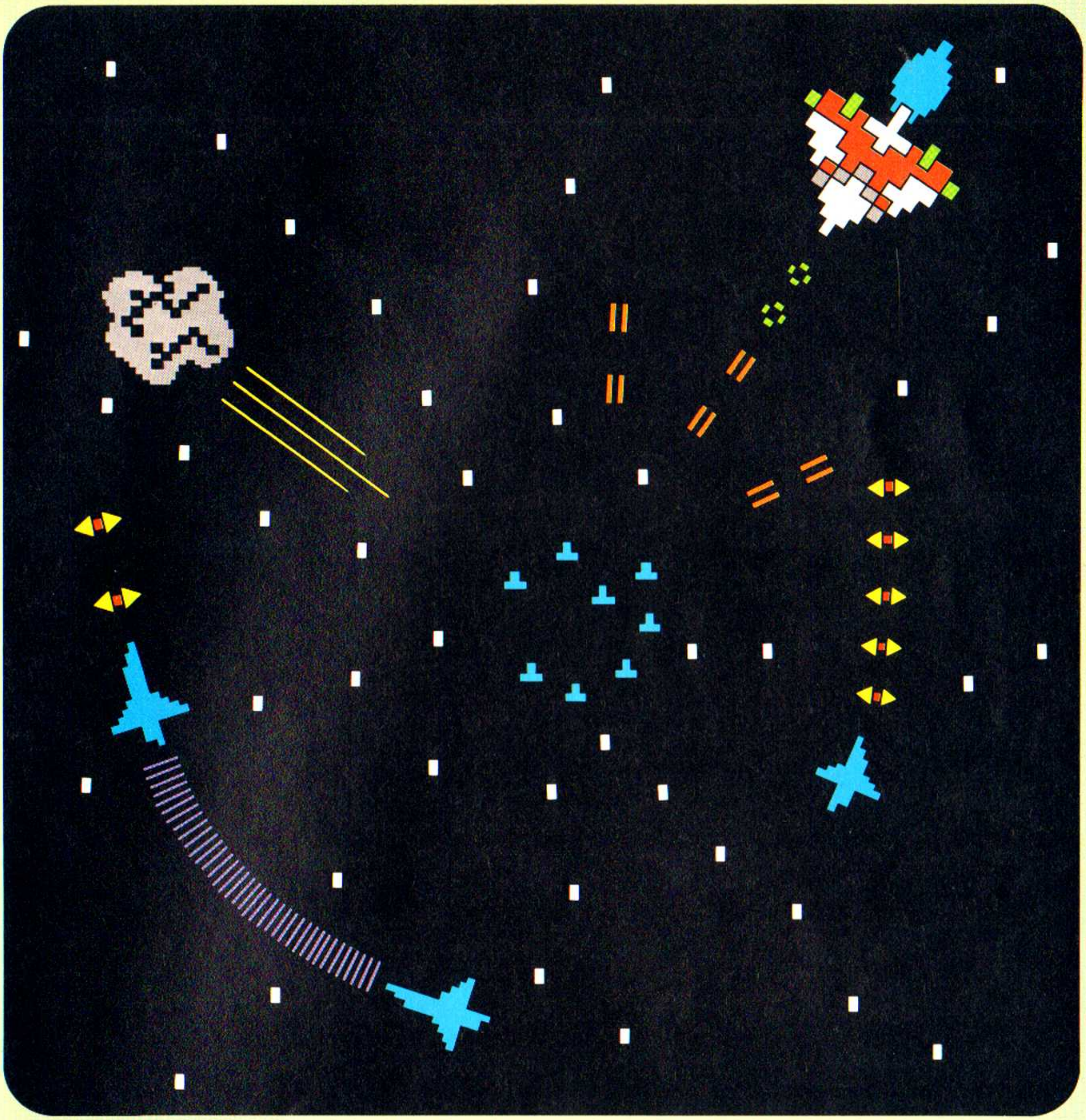
The first four groups of each warp will enter in a line of ten ships. Groups one and two enter from the top left and right respectively. Groups three and four enter similarly, but from the bottom. Position yourself appropriately.

When you reach the chance stage, place your ships at 9 o'clock. Shoot half the aliens, then move to 1 o'clock to finish off the rest. The third group can be handled in the exact opposite manner, since it's a mirror image of group one. To destroy group two, begin at 6 o'clock and blast the twisting double row of ships. Then move to 12 o'clock to destroy the survivors. The fourth group enters at the top and leaves at the bottom.

THREE WARPS TO JUPITER

For group one, begin at the top and blast away until missiles force you to slide to the left and finally to the bottom. Begin on the right side for group two, the left for group three, and the bottom for the fourth group. Always move in the direction the group is travelling, and be careful not to get trapped between missiles and ships which are heading off the edge of the screen.

The groups in Jupiter's chance stage are easily destroyed by positioning your ship at 6 o'clock for one and three, and 12 o'clock for groups two and four. In each case, your ship will have to be slightly off-center. Again, don't chase the ones that get away. They'll come back to you.



To get double firepower: Just before the orange double fireball appears, you will see three sets of small red lines. Line up your ship with the two red lines in the middle. When the orange ball materializes, blast it. Then destroy the satellites on each side.

THREE WARPS TO MARS

The flight patterns become too complicated to describe during this stage. Just remember that you should begin in the upper right for groups one and three, and in the upper left for two and four.

Although the aliens move extremely fast when you reach the chance stage, it is easier than some of the previous stages. Groups one and three require positioning at the bottom left and right. Two and four can be handled by starting at the top or bottom. Keep firing—you're almost home.

THREE WARPS TO EARTH

From here on out, the patterns don't change significantly. In fact, once you complete the chance stage at Earth, you will return to Neptune to begin again. While the patterns remain the same on your second time through, the enemy ships move much faster and fire more missiles.

MINIMUM SCORE POTENTIAL: 80,000

CONTINUED FROM PAGE 37

we're not publishers. We're not here waiting for someone in a basement to sit down on their home computer and come up with the next *Zaxxon* look-alike, to send it to us so we have something to publish, so while we're waiting for that kid to write that game we have to publish a bunch of so-so games to stay in business.

Blank: And we have many more good ideas than we know what to do with.

CG: Where does the sense of humor in all the games come from? (*Everyone points at everyone else.*)

Galley: A lot of the humor is generated because our testers say, "Gee, can I try to 'froo the mumble'?" And they think the program should do something special for that—it's better than just giving the standard response, "You can't do that."

Blank: Like in *Deadline,* there's a toilet. Someone's going to say, "Flush the toilet." Or "Look in the toilet" or "Jump in the toilet."

Meretzky: When you say "Look in the toilet," it says, "You've stooped to a new low."

Blank: Or something about the tidy-bowl man.

Meretzky: If you say "Follow the cat" in *Witness,* it says, "It's sad to see a former great detective now stalking cats."

CG: So a lot of the humor emerges from the game-testing?

Blank: Absolutely. That's a very, very important part of the game.

> **We're not publishers. We're not waiting for someone in a basement to sit down on their home computer and come up with the next *Zaxxon* look-alike . . ."**

Berlyn: Some of the best problems are added to the games *after* they've been played by our testers and recommended by our testers.

CG: What about the effect of interactive prose adventures on literature in general?

Blank: (*laughs*) I think we'll kill it.

Berlyn: Yeah, it's dead. I think we'll put Hemingway right out of business.

Blank: That's true. In fact, I think he's dead, isn't he?

Berlyn: Is he still dead?

CG: Tell me about *Enchanter.*

Blank: We sent it off for duplication today. So unless the plane is hijacked, we expect to see it on the shelves soon. It's in the *Zork*ish tradition. But instead of being the bumbling adventurer, you're a novice who's just graduated from Magician's School. You have a spell book. It's a problem-solving game like *Zork*. It's all magic, it's not underground. And it's intended as the start of a series.

CG: When will *Zork IV* be out?

Blank: There will not be any more *Zorks.* This is *Zork IV* for anyone who really cares.

Berlyn: For anyone who wants *Zork IV,* this is it. For anyone who doesn't want it to be *Zork IV,* this is it.

CG: Are there any other types of fiction you'll do in the future?

Berlyn: "Tales of adventure." Our first one, *Infidel* . . .

Meretzky: In general these are realistic stories of treasure-seeking . . .

Blank: In this one there's a pyramid, the next one might be a . . .

Meretzky: Safari, or a mountain climber . . .

Blank: A spy thing, anything that would be a present-day thriller.

Berlyn: Yeah, they're thrillers, tales of adventure in which you are a swashbuckling adventurer . . .

Blank: In different settings. *Infidel*'s the first of a series. We're also going to have some games aimed at kids. It's early to talk about that, but we're interested.

CG: What about the future of computer games in general, say five years from now?

Blank: Spreadsheet wars.

Berlyn: They're all going to be made into spinach salad and eventually we'll eat them all.

Meretzky: There'll be a lot more variety, there'll be kinds of games that you can't even imagine.

Berlyn: I can't imagine that. But we *are* working on the future.

Blank: Yes, we're building one in our backyard. ☐

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The computer magazine for computer fans who love their computers and want to read about computers 24 hours a day

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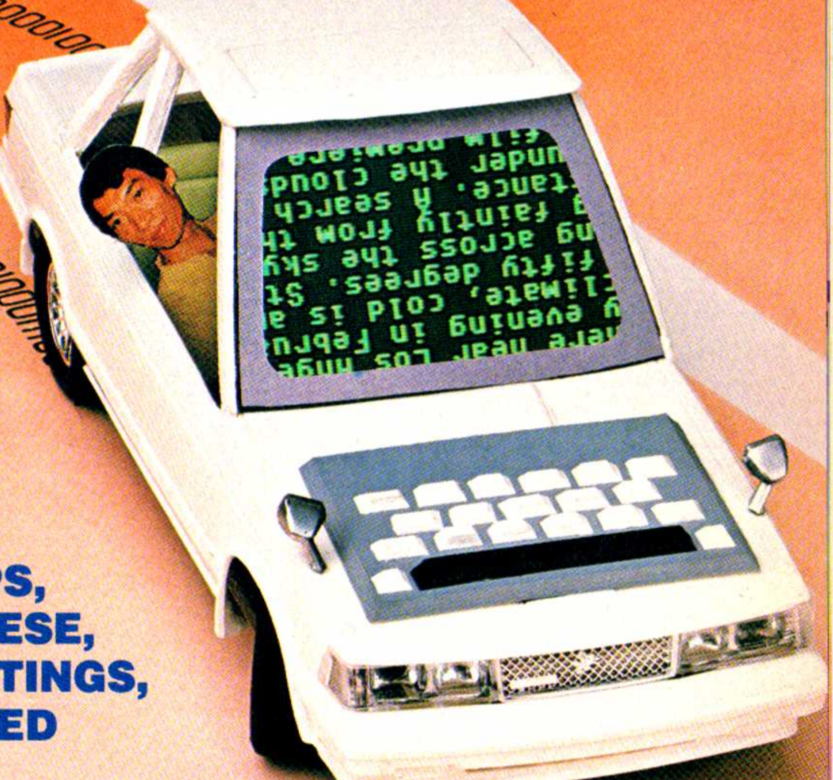


ILLUSTRATION BY JAMES NAZZ

LETTERS TO THE EDITOR

Sirs,
I followed your advice in last month's issue about machine language, and now my nephew's dead.
Bob Gordon

We're sorry, but we claim no responsibility for typographical errors.

Sirs,
I've heard there's a way to extend the life of my floppy disks. Do you know about it?
Marshall Arz

Apply three tubes of Crazy Glue to your disks and press them together tightly for twenty minutes.

Sirs,
Which is the best computer for me?
Barb Wyer

None of your damn business.

Sirs,
I've been having trouble getting my Epson QX-10 to interface with my TP-2 printer. What do you suggest?
Mike Roprocessor

Plug a Cardco parallel interface into your RS232C port, start your car engine, close the garage door and do deep breathing exercises for 20 minutes.

Sirs,
I don't know anything about computers. I just bought a Timex-Sinclair 1000. What do I do next?
Bertha DaBloose

Sell it.

Sirs,
Hey, I got a great idea for an article for you guys—"Which Home Computer Should *You* Buy?" I don't know why nobody ever thought of it before. Get on the stick, guys.
Mick Alobe

Sirs,
What is the difference between floppy disks and cassette tape?
Ann Hizerbush

About a half-hour.

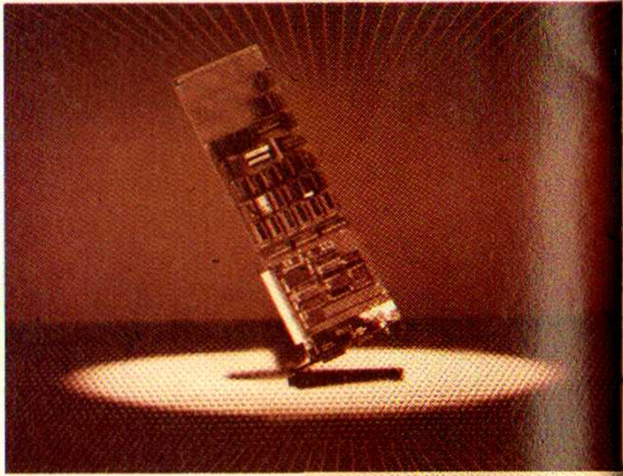
Sirs,
I got a double hernia carrying your March issue home from the 7-Eleven. Then I got a subscription so I wouldn't have to carry it, but I missed the April issue because my mailman is in a wheelchair. What should I do?
Phillip Head

NEW PRODUCTS

WORLD'S LARGEST TRAK-BALL $79

Wico's Super Action Trak-Ball/Hood Ornament is perfect for players with huge hands. It gives accurate control for all games, and if you still don't win, you can smash your opponent over the head with it. Five decorator colors. Demonstrated here by the Wico Witch of the West.

MEMORY REDUCER BOARD $49



Why should your computer have more memory than you do? Turn that Commodore 64 into a Commodore 16 with this nifty device that can reduce any computer's memory by as much as 68%. Just plug it in and watch those K disappear. By Pop's Peripherals, who also make excellent 2-column boards.

EMERGENCY POWER SOURCE $139

Power surge crashes are a thing of the past with this two-cylinder, four-stroke, eight-horsepower baby that plugs right into your parallel port. Not only does it eliminate database loss, it'll make your printer go from 0 to 120 characters in six seconds flat. Also compatible with most snow blowers.

THE JOYCHAIR $159

Amiga takes their Joyboard one step further with The Joychair. Lean left and your onscreen persona moves left. Lean right and your onscreen persona moves right. Blends in with your decor and allows you to eat, read, knit or sleep while you play.

They laughed at my program so . . . I AXE-MURDERED MY USERS GROUP!

By Norman Goldfine

After reading my 3,000th article on "Why You Should Join a Users Group," I finally decided to check it out. Six-pack of floppies in hand, I sauntered into the cottage of Sandy Berman, whose home served as this month's meeting place. Since a lot of people trade programs at users clubs, I'd taken along some programs I'd written myself, eager to share them.

The trading group was on the far side of the room, and I had to elbow my way through a gaggle of nerds arguing about the meaning of "IBM-compatible," then slowly circle a pack of word processor junkies debating the pros and cons of WordStar. I was in a bad mood already, having just read in *Popular Computing* that every piece of hardware I own is now obsolete.

When I finally reached the exchange group over by the fireplace, I booted up my first program for the crowd. "What's *this* garbage?" scoffed a skinny 14-year-old boy.

"VisiLaundryList," I calmly explained, restraining myself from wringing his neck. "It sorts out your dirty socks and underwear according to the type of stain and the date you threw it under the bed." A few users suppressed outright laughter, but the guy in the t-shirt that said, "*I've* got a hard-disk drive!" smirked as he ripped out my disk.

"Hold it," I said, slipping in a copy of CosbyCalc. "This one's really handy—it keeps track of the number of times you see Bill Cosby in TV commercials, indexing them by product and other keywords." That's when they all burst out laughing—*at* me, not with me.

"Come here, everybody," the kid shouted, and 47 users huddled around, chortling and giggling while he scornfully ridiculed the program I'd spent three months writing. I couldn't take it. That's when I grabbed the axe beside the fireplace and lopped off his head.

"Debug this!" I screamed, slashing savagely at the hysterical hackers until the room ran with blood. Then I went into the workshop, grabbed the chainsaw and (continued on page 361)

Tired of telecommunicating with the same old computers and networks? Try the

Mystic Modem

the only modem that allows you to communicate with the dead! Engage in simulated CB-chat with your dearest departed loved ones. Call up JFK for his side of the story. With the only modem that lets you reverse the charges!

- *includes terminal program from Seance Software*
- *Compatible with all home computers*
- *Half, full or* ***no*** *duplex*
- *Incoming data from the dead can be saved to disk or printed automatically*
- *Menu-driven to please!*

Another power-packed peripheral from Houdini Hardware

SOFTWARE PIRACY: WHO CARES?

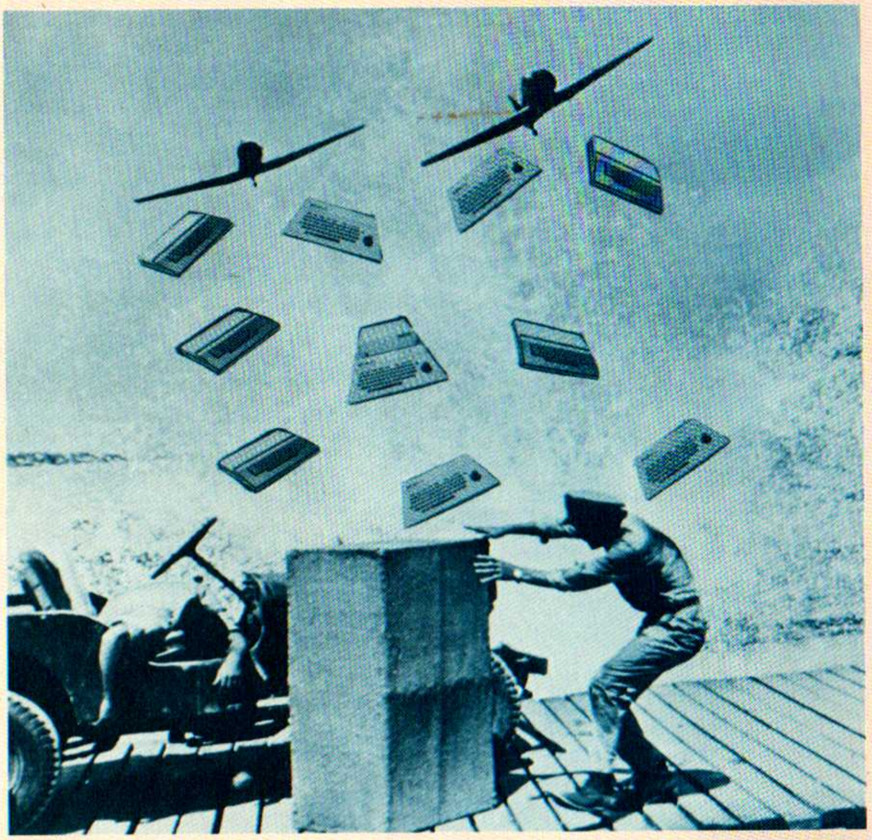
Why bother learning the intricacies of programming, or spend a bundle on a piece of software, just so you can "unlock" the code of commercial software and make all the copies you want? There are much faster ways of pirating software now available.

Xeroxing, for instance. Just slap a copy of *Choplifter* onto a 25¢ copy machine and you can crank out hundreds of the things, just like that! Distribute them to your friends, neighbors, keep thirty for yourself.

One of the main drawbacks to this and other types of software piracy is that you don't get the necessary documentation or attractive packaging that comes with the software when you buy it off the shelf. Solution? Shoplifting! Just carry a folded newspaper into the store and slip in all the conveniently thin software packages that will fit.

Then there's the old .357 magnum/stocking-over-the-head trick. In addition to free software, you can pick up a lot of extra cash this way. First load the .357 with dum dums (cont. on page 825)

JAPANESE INVADE SILICON VALLEY!
"A day that will live in infamy..."



Silicon Valley, December 7, 1983—A Japanese sneak attack this morning left thousands of high-tech workers and executives unemployed and out of business. Every major hardware and software company in Silicon Valley was devastated by a savage bombardment of new Japanese computers, peripherals and joystick adapters that blasted huge craters in the cash flow projections of everyone from Apple to Zircon.

The first wave of bombers knocked out Apple's main plant in Sunnyvale, hitting it hard with several hundred mini-disk drives and a dynamic new 6502 chip that also does windows. Atari suffered equally disastrous damage after being shelled with 4000 Sony home computers and sustaining direct hits from a new series of upgraded RGB monitor and an exciting new breakthrough in dust covers. Activision was the only firm that escaped damage, because its entire staff has (for security reasons) been operating out of a converted bomb shelter since early this year.

When asked how the U.S. plans to retaliate, President Reagan rolled over and said, "You woke me up for *this*?" At a subsequent news conference, Reagan announced a ban on all sushi imports and Godzilla sequels. After intense badgering by Sam Donaldson, he also threatened to bomb Tokyo with a stockpile of Commodore MAX machines and Osborne portable computers and an arsenal of Timex Sinclair 16K memory expanders that were mothballed in 1982. "This is a day that will live in infamy," Reagan swore, "or at least until our database files refuse to load."

SOFTWARE OF THE MONTH

BANKRUPTCY STREET WRITER

This easy-to-use word processor is one of the most dynamic new programs on the market. In addition to standard text editing and formatting, it features a unique "Chapter 11" option that's handy for any business on the rocks. It also automatically prints form letters that say, "Your check is in the mail." *Bankruptcy Street Writer* is the perfect choice for high-tech companies and software houses who want to be prepared for the worst in the upcoming shakeout in the computer industry.

DeBASE2

Databases come and go, but this one's here to stay. Totally menu-driven, *DeBASE2* will humiliate and degrade you every time you attempt to retrieve information, create new files or even *say* "keyword."

REICHWRITER

Developed by Klaus Barbie while hiding in a Bolivian jungle, *Reichwriter* offers professional word processing for the Master Race. It has dynamic new features, too, like "Search & Exterminate." You'll get incredible results from this program—*if* you follow orders!

MS. MINER 2049ER

Dazzling graphics, superb music and other great features make this one of the year's best games. You, as militant feminist Bounty Bobbie, must organize the miners to strike for non-sexist hiring practices by the mining company.

KEN USTON'S PROFESSIONAL "GO FISH"

Ken Uston won a sizable fortune before he was barred from playing in private homes across the country because he was caught counting cards at "Go Fish." Now *you* can learn how to win big bucks with his new program, which can be modified to reflect the various rules and betting options in "Go Fish" around the world.

WHOOPS! CORRECTIONS TO PREVIOUS LISTINGS

Atari FILEFAST

Sorry, but we did it again. In this listing, which appeared in our June issue, there was a typo in the following line:

```
230  IF C=15 THEN PRINT
"ENTER A NUMBER FROM 1 TO 6"
```

It should be replaced with this line:

```
230  IF C=15 THEN PRINT
"ENTER A NUMBER FROM 1 TO 6"
```

Apple AUTOTERM

There was also a tiny error in this program, which ran in the July issue. Simply add the following line to your program:

```
1  END
```

We'd also like to apologize for printing page 47 of our May issue upside-down and for running the assembly language program in the January issue backwards. Readers who have already typed in that program can simply put a mirror in front of the monitor when running the program. In addition, we want to assure readers that we sincerely regret printing the index of advertisers on the cover of our March issue and printing the article on "How Low Can LOGO?" in Sanskrit.

RANDOM ACCESS

The Microcompudataedusoftfunbytediskware Company has released a new computer game, but we don't know its name because they only had enough room for the name of the company. Hottest hardware development of the month: Hagen Das is marketing a new portable computer utilizing a dynamically enhanced microprocessor called the "chocolate chocolate chip."

We regret to inform you that Bill Cosby died last Thursday after being electrocuted while taping a TV commercial for the TI 99/4A computer. Texas, rumor has it, will soon be making a bold move by reentering the pocket calculator field.

It Had to Happen Dept.: Hoping to match the success of franchised retail operations like ComputerLand and SoftwareLand, a California entrepreneur has opened the nation's first branch of Won'tLoadLand... DataSoft and DataMost may merge to form MostSoft, specializing in ice cream and toilet paper... In Hollywood, Dean Martin has reportedly put up the investment capital to produce the first "boozer-friendly" computer... Also, Herve Villechaize has been selected as the official spokesman for Timex Sinclair computers... And it seems that virtually every magazine on the stands now features articles about home computers. The latest is a technical piece in *Soldier of Fortune – "Fieldstripping the IBM Peanut."*

NEXT ISSUE

- **Machine language for morons**
- **Special 10-page in-depth report on dust covers**
- **Photos of people looking at computers**
- **How to dry clean your computer**
- **How to turn your bathroom into a mainframe**
- **How to find saps to buy your obsolete equipment.**
- **How to buy "How To Buy..." books.**
- **We rate the styrofoam from computer boxes.**
- **We rate everthing ever manufactured**

SHAVE NEW YORK!

Alien whiskers disguised as skyscrapers have taken over Manhattan, and you score points for each one you shave off with your "Laser Razor." But you're penalized for removing real buildings, so watch it! Bonus points are awarded for avoiding nicks, cuts and 5:00 shadow.

Another exciting new game from Schick Software

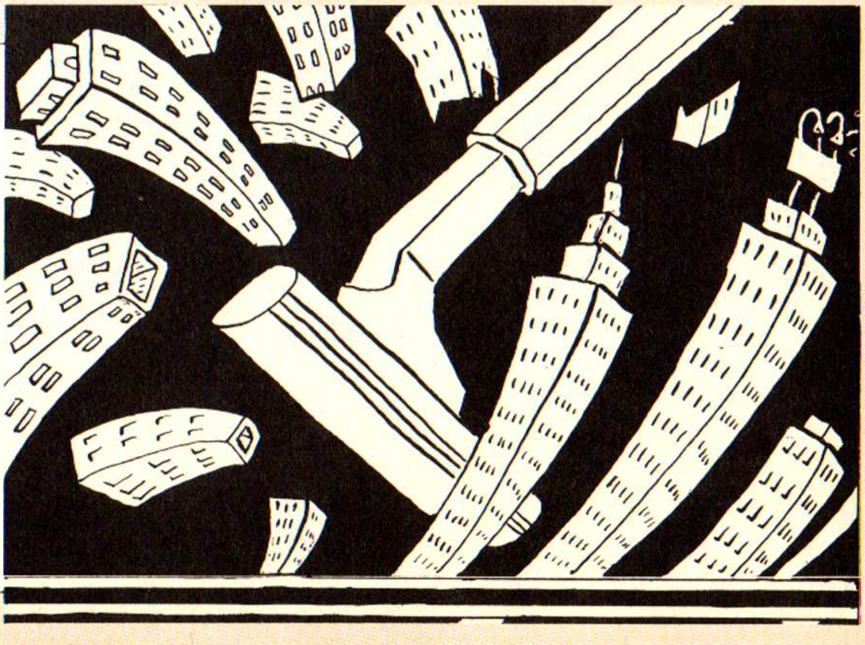


ILLUSTRATION BY MICHAEL BARTALOS

NINE GOOD REASONS

CLUES
How to beat the top games like *Star Wars, Congo Bongo, Time Pilot.*

CAN YOU SURVIVE?
Tricky situations for top players.

ONE ON ONE
Comparisons of similar games

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Reviews of the latest computer games

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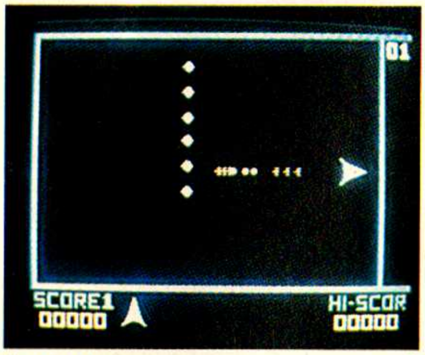
COMPUTER GAME BUYER'S GUIDE

By Shay Addams and Dan Gutman



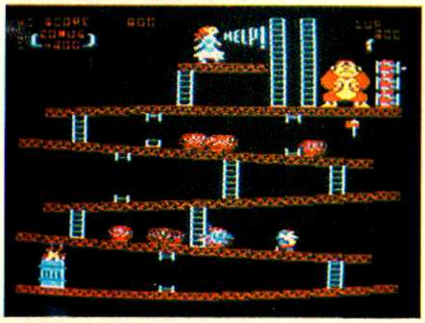
FRAZZLE

C

"Killer beasties" from space have invaded your TV screen, and you don't even have a joystick to fight back with! Instead, you control your ship from the keyboard, steering as you would in *Asteroids*. Your arsenal's limited to 16 Energy Probes that float in space like mines. You wipe out the enemy by planting a series of probes.

Blast all the beasties and six more appear. On the second and third levels, they move in different patterns. On levels four and five, they rematerialize as soon as they're destroyed. Sound is decent for an Apple game. Color and animation, though acceptable, are weak. *Frazzle* is far from state of the art, and it's a real drag hitting the keyboard instead of leaning on a joystick.

Muse, for Apple with Applesoft ROM

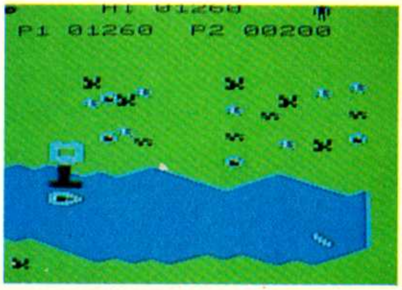


DONKEY KONG

A

We didn't think the Coleco version could be topped, but Atari has done it. The most striking difference is the speed—no longer is Mario's climb such a tedious chore. He scoots along the girders and up the ladders, and you don't have to struggle to find the *bottoms* of those ladders. The sound and graphics are better also. Mario's girlfriend now looks like she might almost be *worth* rescuing, and she shouts, "HELP!" The game isn't any easier, though—now Mario can hit his head on barrels on the girder above when he jumps. The game has four screens—Girders, Rivets, Elevators and Conveyor belts. There are five difficulty levels, each of which can be played by one or two players. You don't have to stare at the word COLECOVISION for an hour, and best of all, Kong even jumps up and down on the girders if you don't start your next game in a minute and 13 seconds. Atari owners can now enjoy an excellent translation of the arcade classic.

Atari, for Atari computers



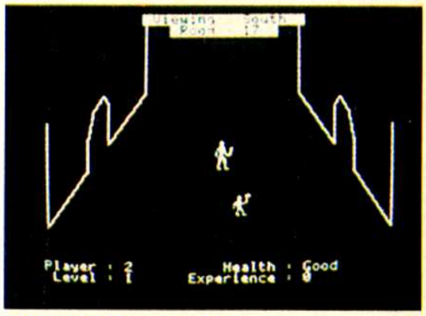
RIVER RESCUE

B

Choplifter goes upstream in this one, in which you steer a river rescue boat to pick up lost explorers from docks on the north bank, then drop them off on the opposite shore. You've got to avoid all kinds of deadly obstacles in the water. In the Atari version, these more closely resemble the alligators, hippos and rocks they're meant to represent.

You get three boats with VIC, five with Atari. The VIC's graphics can't compare with those of the Atari, but the river in the VIC version is trickier to navigate. A beeping radio transmitter alerts you when you're approaching one of the explorers. The sound is effective on both versions, and either one adds up to hours of action-packed joysticking.

Thorn EMI, for VIC-20 and Atari



THE MISSING RING

B

This fantasy role-playing game captures more of the feel of the original *Dungeons and Dragons* than many such computer games. That's partly because as many as five people can play at once, forming exploring parties like in *D&D*.

First you choose from nine character types that include the usual elves, dwarves and wizards. You can also determine the kind of weapon your character's armed with, anything from a sword, axes and bows to a hammer. Wizards and clerics have a number of magical powers, from healing light wounds and hurling "magic missiles" to charming various monsters into allowing the explorers to pass by safely.

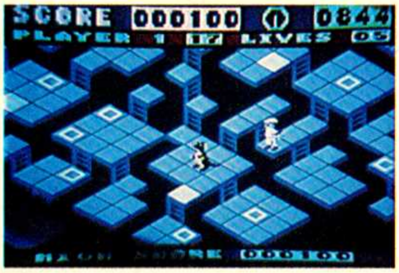
After each player selects his character, he gets to spend his gold on healing potions, which come in handy if you're wounded while wandering through the many rooms and corridors of the enchanted palace.

Ring is unique in that it allows players to move individually, wandering off to check out different rooms if they decide to split up. Each character flashes onscreen when it's his turn, and if you don't move fast enough you miss your turn.

Instead of looking down on the maze from above the way you do in *Temple of Apshai*, you face the walls and doors in this game. They're drawn with a three dimensional effect that imparts a better impression of actually being there.

Up to nine games can be saved in progress on the game disk, which is convenient. But you can't inventory the treasures you've found as you proceed. Also, there's no sound.

Datamost, for Apple



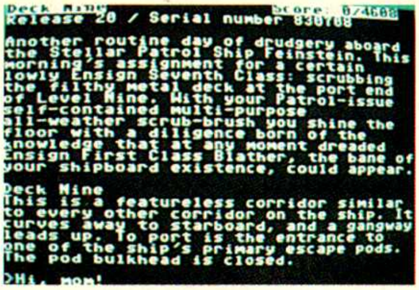
FLIP & FLOP

A-

As *Pac-Man* popularized the maze game, *Q*Bert* introduced the "hop around and change things" game. Rather than just ripoff *Q*Bert*, First Star has borrowed that general idea and altered it enough to create a fresh, new, wonderful game. The biggest change is also the simplest, and we don't know why nobody thought of it sooner. On alternating waves, the entire field turns over and you have to play the game upside down! This unusual orientation requires a whole new set of skills.

Even without that feature, *Flip & Flop* is not *Q*Bert*. If you plan your moves carefully, you can lure the zookeeper to a square covered with flypaper. And if the zookeeper doesn't catch you, his net might. The 30 level game features bouncy circus music, animated intermissions, and colorful characters like Flip the Kangaroo and Mitch the Monkey. The game should be very popular with kids, but you can sneak downstairs and play it after they go to bed. Q*Bert was truly an original arcade game. But games like *Flip & Flop* and *Juice* (by Tronix, reviewed last issue) go beyond it.

First Star, for Atari computers



```
Deck Nine                              Score: 0/4688
Release 20 / Serial number 830708

Another routine day of drudgery aboard
the Stellar Patrol Ship Feinstein. This
morning's assignment for a certain
lowly Ensign Seventh Class: scrubbing
the filthy metal deck at the port end
of Level Nine. With your Patrol-issue
self-contained multi-purpose
all-weather scrub-brush you shine the
floor with a diligence born of the
knowledge that at any moment dreaded
Ensign First Class Blather, the bane of
your shipboard existence, could appear.

Deck Nine
This is a featureless corridor similar
to every other corridor on the ship. It
curves away to starboard, and a gangway
leads up. To port is the entrance to
one of the ship's primary escape pods.
The pod bulkhead is closed.

>Hi, mom!
```

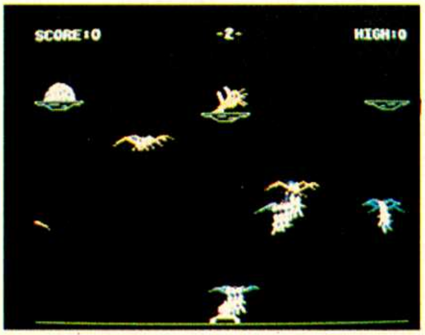
PLANETFALL

A+

As a lowly Ensign 7th Class onboard a Stellar Patrol ship, all you have to do is scrub the deck—until disaster strikes and you're marooned on an uncharted planet. Mapping the mysterious pair of scientific complexes there isn't as hard as in many of Infocom's all-text adventures, and some problems are easier. Top score is 80, and you get "promotions" as your score increases. (But advancing past Planetary Commodore is a real braincrusher.)

The element that distinguishes *Planetfall* is that you must eat and sleep regularly—or die. This adds enormously to the "you are there" feel of the game, Steve Meretzky's first. Also, you get to *do* a lot: drive a subway, operate elevators and teleportational units, and even retrieve vital data from an alien computer. A warped sense of humor prevails. Hawaiian music "oozes" from the elevator, and Floyd, a laugh-a-minute robot, follows you around like a puppy. You'll sober up quickly, though, as the story unfolds and you realize what an interstellar jam you've stumbled into this time.

Infocom, for Atari, Apple, C-64, IBM PC, Osborne 1, CP/M, DEC Rainbow, TI Professional

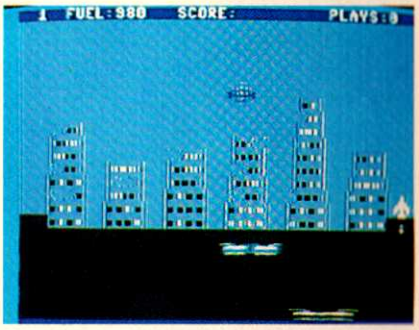


BUZZARD BAIT

C

Sometimes you can put *too* much in a game. *Buzzard Bait* looks like it started out as a standard *Demon Attack* space game, but somebody said, "Hey, let's put in flying penguins, mines, and a completely different bonus screen." The animation is great and it's hysterical to watch the humans fall on their heads or get eaten by the baby birds, but the game doesn't make sense. Why do the penguins kill you in the game but just push you aside in the bonus round? Why do the humans walk out of the nests to their deaths? What kind of ship can jump halfway up the screen but can't fly? The animation tells an interesting little story, but the penguin and the unplayable bonus round don't seem to fit in anywhere. If a few of these extra added attractions had been removed, *Buzzard Bait* might have made a better—but very simple—little shoot-'em-up.

Sirius Software, for Apple



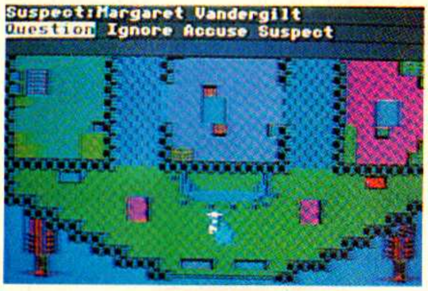
SAVE NEW YORK

B

Anybody can sing "*I Love New York*," but are you willing to have dogfights with alien space mutants to defend the Big Apple? In *SNY*, birdlike creatures come out of the sky and literally *eat* the New York skyline. You control a rocket ship that can roam the screen freely, firing lasers. If you don't hit a mutant fast enough, he will lay an egg and baby mutants will infest the subways beneath the city. You can land your ship and go after them on foot, but you may also get run over by the trains.

Save New York is a catchy shoot-'em-up that has some depth to it. Control of the ship is solid and the graphics are sharp and colorful. The aliens can fly *behind* the buildings. The lights twinkle like buildings full of workaholics flicking the switches on and off. It would have been nice if the field could scroll along the skyline, and we thought the image could have been enlarged by putting the above-ground segment and the below-ground segment on separate screens. A solid game, though.

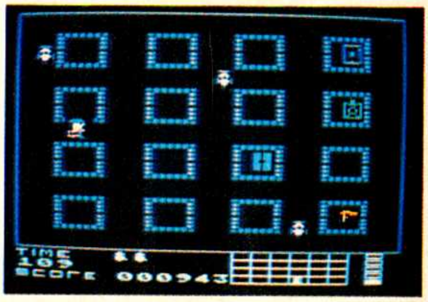
Creative Software, for C-64. Also for VIC-20.



MURDER ON THE ZINDERNEUF A

For some people, Infocom's incredible all-text murder mysteries (*Deadline, The Witness*) are too heavy—too much to read, too much work. For people who love a mystery but don't have four months to devote to a game, *Murder on the Zinderneuf* is perfect. Like the Infocom games, you can shadow suspects, interrogate them and accuse them of the crime. But everything is joystick-controlled and you can actually *see* the floor plan, the suspects and yourself on the screen. Unlike the Infocom games, a game of *Zinderneuf* is over in 36 minutes whether you solve the crime or not. And at the end of the game you are told who the actual murderer was. You get to pick one of eight detectives to represent yourself, you can question the 15 suspects in five different ways, and each time you play, there's a new victim and a new murderer. Hardcore Infocom fans may find *Zinderneuf* a bit simplistic—everyone else will be fascinated.

Electronic Arts, for C-64 and Atari computers



THE SPY STRIKES BACK A

Just when you thought it was safe to go back to the computer, Dr. X attacks! As Agent OOP, your mission is to track him down in his German castle. You have to collect clues, pistols and other objects stored in the various rooms, represented by boxes, before moving on to another section or level of the castle. Just guide the well-animated spy toward a box, and the door, if it's on that side, opens automatically. Dr. X's electronic guards continually prowl the corridors, blasting you to atoms with a mini-nuke if they hit you.

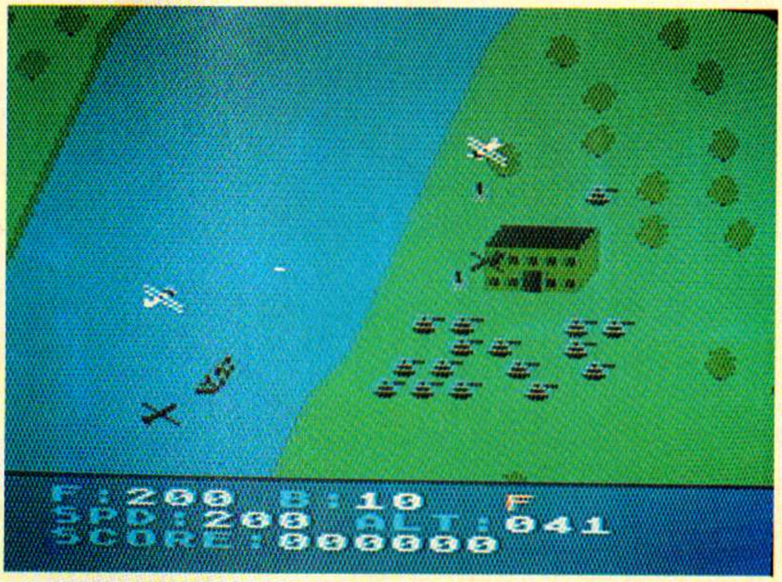
This is where the game's subtitle—"Or How to Not Be Seen"—comes in. You're safe while inside a box, so you can hide in one until the guards pass by. Some boxes are elevators that carry you to any of the castle's five levels. Or you can find a ring, which activates an arrow showing the exit to another section of the same level. There are 120 sections to search. When you run over a spy-shaped outline in the halls, a code appears onscreen. Cracking it will get you $100 worth of free software from Penguin.

The best part about this is that the contest isn't limited to a single winner, or ten or twenty. The first player in each state and Canadian province to solve the puzzle will win the same prize. And if that's not enough, Penguin will do the same for the first winner in each foreign country, even Togo! (Hey, what about gamers on Mars and Io, eh?)

The music, all classical selections, varies intermittently, and makes this game a joy to play. Cracking the code could even make it lucrative.

Penguin Software, for Apple and Atari computers

GAME OF THE MONTH

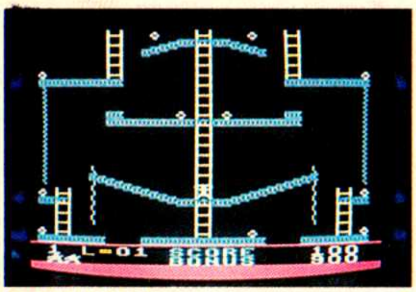


BLUE MAX A+

This one makes *Zaxxon* look like *Pong*. The 3-D scrolling and attention to detail (down to the shadow of your World War I biplane as it flies overhead) are exceptional. First you taxi down a runway and maneuver to the proper altitude to strafe or bomb enemy tanks, boats, some deadly enemy airplanes, and buildings. The bottom of the screen gives reports on your altitude, speed, fuel and other data.

You only get one biplane. If it's shot down or runs out of fuel, that's all, ace. But you can land at occasional airports and extend playing time by refueling and rearming. Once you knock out the right targets, you fly over the enemy city, where you must complete your mission—to blast three key capitol buildings and land at a friendly airport. *Blue Max* combines razzle-dazzle graphics, effective sound and rare game design and execution, which adds up to one of the best action games ever.

Synapse, for C-64 and Atari computers



JUMPMAN JR.

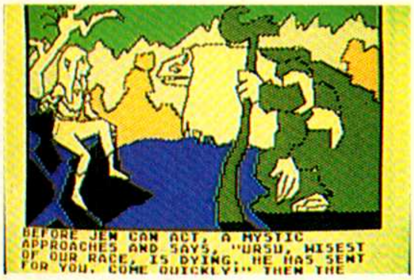
A

The original *Jumpman* is one of the best ladder games around, but because it's on disk, you have to wait patiently for the next screen to LOAD. *Jr.* is on a convenient ROM cartridge, however, so there's only the briefest pause between screens.

As in *Jumpman*, you've got to race around touching bombs to defuse them (and score points), ducking an occasional flying bullet. The animation's superb as you run up and down ladders, leap across wide chasms and frenetically climb down ropes. The twelve screens include levels like "Electrocution" and "Dumbwaiter," incorporating unique special effects and challenges in each.

Up to four players can alternate on the same joystick, and the speed can be set from 1–8. The music's unusually good, with interesting harmonies, and even some blues tossed in here and there. You get an extra Jumpman every 7,500 points. If you lose them all, an earthquake rattles the structure you've been climbing and shakes it apart block by block. The fast-paced action and nonstop fun make this a sequel that can stand on its own two legs—and jump!

Epyx, for C-64 and Atari computers



BEFORE JEN CAN ACT, A MYSTIC
APPROACHES AND SAYS, "URSU, WISEST
OF OUR RACE, IS DYING. HE HAS SENT
FOR YOU. COME QUICKLY!" THEN THE

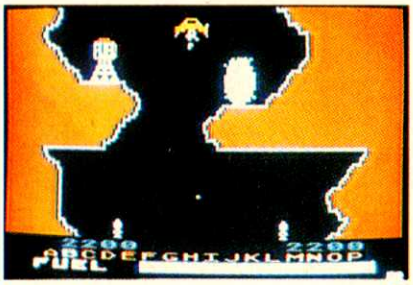
THE DARK CRYSTAL

A-

Even if you didn't see the film, you'll enjoy this graphics adventure game version. As Jen, you're destined to wander through forests, over hills and across streams to find and restore a piece of the Crystal before the world is doomed. Sharply defined and colorful, cartoony graphics illustrate the journey.

In addition to the graphics, four lines of text at the bottom of each screen give details, sometimes going on as long as eight lines. *Cryatal* uses a two-word parser, so you can only use commands like, "GO NORTH." Tapping "return" twice presents you with a screenful of text, the last 5–6 commands you entered and their responses. This is a handy feature for adventures. To explore the dozens of different scenes in this game, you're often prompted to insert another disk. There are three, and the program warns you if you've inserted the wrong one.

Sierra On-Line, for Atari computers



PHOBOS

A-

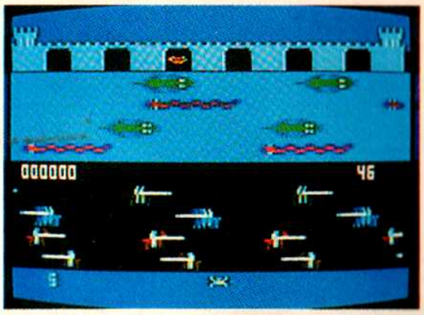
On a Martian moon, Phobos, you're piloting a ship that plummets straight down through the surface as you seek and destroy renegade Martians who've built bases there. Other targets include fuel tanks and deadly saucers and missiles. Smashing into *anything* is sudden death, but maneuverabilty is excellent.

There are 16 levels of caverns to penetrate, and it gets harder to squeeze through the tricky cavern entrances as you zoom deeper beneath the surface. At the very bottom, you'll get a crack at the Martian headquarters.

Knock it out and those industrious Martians will rebuild *everything* instantly, so you have to start from the top again. Current and high scores are constantly posted. Color's outstanding; animation and sound are well-defined, too. Four skill levels extend the game's lifetime.

This is an excellent example of the many user-written games made available by APX.

Atari Program Exchange, for Atari computers

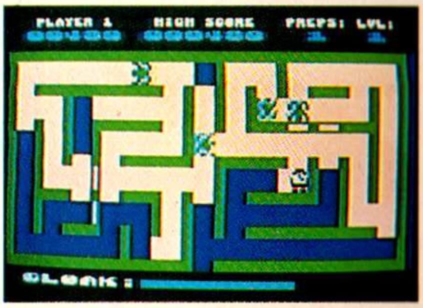


PRINCESS AND FROG

F

Usually, manufacturers of ripoff games at least make an attempt to give the *illusion* the game is original. They'll alter a character, change the action slightly, change the name of the game—*anything*. But with *Princess and Frog*, Romox has given us a nearly exact copy of *Frogger*, and a pathetic one at that. It's all here, including a lady frog you jump on in the river. Since Parker Brothers and Sierra On-Line already make excellent versions of *Frogger* for the Atari, the last thing anybody needs is another one. We understand that Romox puts their games on erasable chips that allow you to go back to the store and have another game program transferred onto them. With *Princess and Frog*, that may be the *only* redeeming quality.

Romox, for Atari computers



PREPPIE II

B

Most sequel games are tired rehashes of the originals, but *Preppie II* is actually fresher than *Preppie*. *Preppie II* puts our hero, Wadsworth Overcash, on three mazes where he must "paint" the floors (as in *Make Trax*) by walking over them. This time Wadsworth has revolving doors he can use to trap the frogs. The game features nice bright graphics, cute intermissions and pause.

Adventure International, for Atari computers

DINO EGGS™

Nine skill levels, a different deadly challenge on each level. All with high resolution color graphics.

All you wanted to do was leap back in time to the Mesozoic Era and see what prehistoric life was like. But, unfortunately, you also brought along a case of 21st Century measles and contaminated all the dinosaurs.

Has your blunder doomed the dinos? Not if you can dig up enough dino eggs and carry them safely back to your time warp.

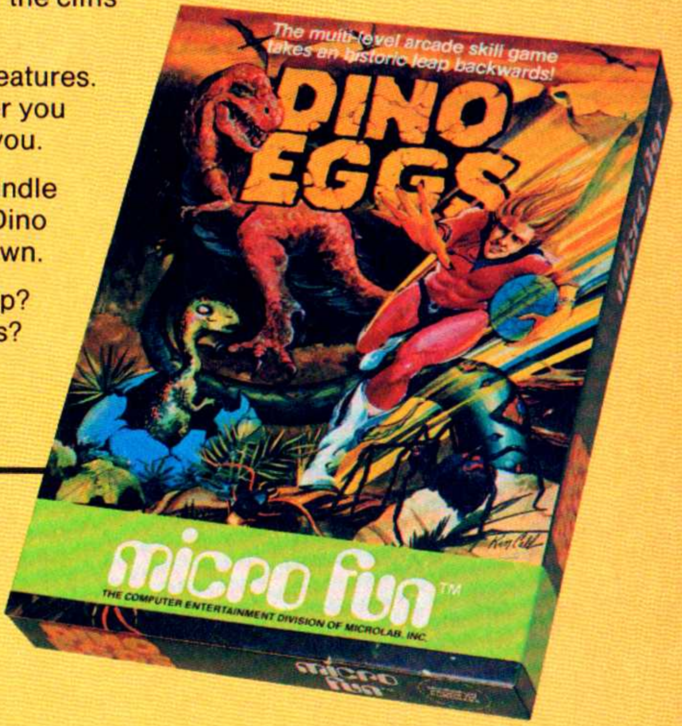
But this monumental task becomes even more difficult when you encounter the dino's natural enemies. Squirming proto-snakes, crawling proto-pedes, falling proto-spiders.

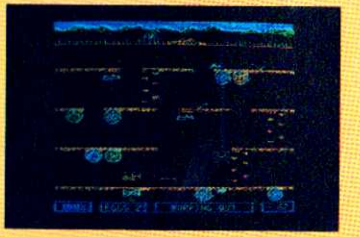
To avoid them, you must climb, leap, jump and run all over the cliffs where the dino eggs are buried.

Each cliff challenges you with a different set of deadly creatures. And you can progress through nine skill levels. The higher you go, the more often the crawly, squirmy creatures rush at you.

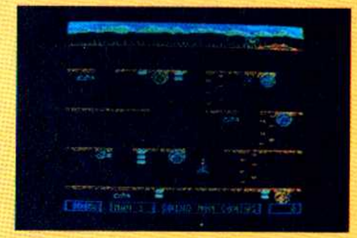
One more small problem. If you fail to gather wood and kindle a fire, the lady who laid the eggs may step in. And when Dino Mom puts her foot down, Dino Mom really puts her foot down.

Are you quick enough to sidestep Dino Mom's 10-ton stomp? Agile enough to dodge the radioactive snakes and spiders? Can you save the dinosaurs from extinction? Climb into the Dino Eggs time warp and find out if you can hack it in the good old days.

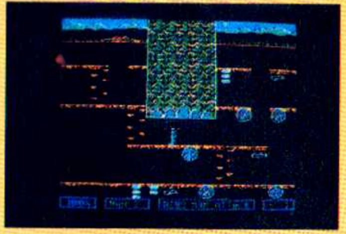

The multi-level arcade skill game takes an historic leap backwards!
DINO EGGS
micro fun™
THE COMPUTER ENTERTAINMENT DIVISION OF MICROLAB, INC.



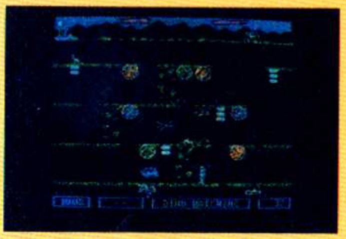
Proto-snake bite can de-volutionize you into a spider.



Eat the strength flower and carry more eggs.



Dino Mom catches you taking her eggs. A smashing situation!



Each skill level brings new creatures, greater danger.

Available for
Apple II & IIe
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312/433-7550

Video Game Firsts

Before anything can be done by the entire world, it must be done "first." After the video world was entered in 1970 by the first arcade game, Computer Space, a never-ending series of firsts was set into motion. A few are reprinted here for your inter-game entertainment. It takes something extra to do something before anyone else does it—one must be adventurous, innovative or crazy. But most important, one must be FIRST.

By Michael Rubin

The First Home Video Game

Odyssey 100, made by Magnavox. Invented by Ralph Baer and introduced in 1972, the Odyssey 100 could play several varieties of tennis and hockey, as well as some maze games.

The First Game With A Trak-Ball

NFL Football, by Atari.

The First Couple To Be Married In An Arcade

On May 30, 1982, Kyle Riley and Jo Linda Richardson were married where they met—next to **Pac-Man** at the Fun Factory, an arcade in West Des Moines, Iowa. Atop their wedding cake, Mr. and Ms. Pac-Man stood over a field of their game, and the couple's bridal suite came furnished with a *Pac-Man* game and a roll of quarters.

The First Game With A Hyperspace Button

Space Wars, made by Cinematronics in 1978, had the first arcade hyperspace button, but it was actually invented by J.M. Graetz at MIT for *Spacewars* back in 1962.

The First Record Album About Video Games

Buckner and Garcia recorded an album in 1981 called *Pac-Man Fever,* which includes such classics as *Do the Donkey Kong, Hyperspace, Froggy's Lament* and, of course, *Pac-Man Fever.*

The First Video Game Made Into A Television Show Or Movie

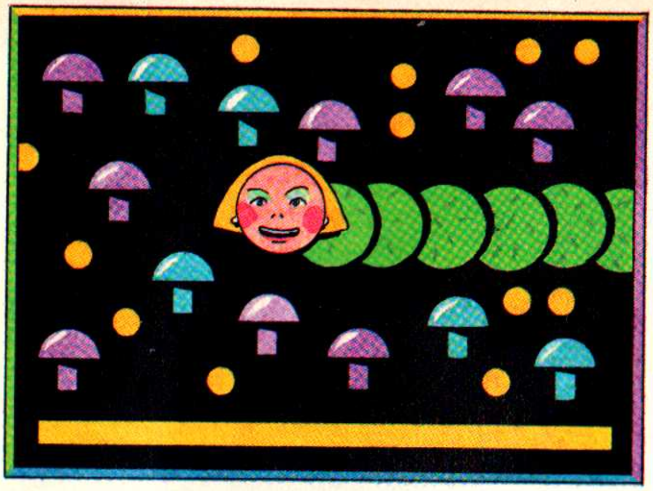
Tron (not *Pac-Man* cartoons, and not *Star Trek*), by Bally/Midway.

The First Movie Or Television Show Made Into A Video Game

Here's a surprise—it's not *Tron* and it's not *Star Trek, Star Wars* or even *Porky's II.* Did you guess **Deathrace?** It's taken from the movie *Deathrace 2000,* in which they drove around trying to kill people. *Deathrace* (by Exidy) was also the first game to be taken off the market because of its violent nature.

The First Cocktail-Style (Sit-Down) Video Game

Space Invaders, by Taito. When *Space Invaders* "thumpa-thumpa-ed" its way into the hearts and pockets of the world, it was introduced with both the standard arcade upright version and an interesting sit-down, cocktail version. The style caught on.



The First Game Designed By A Woman

Centipede, by Atari. By the way, it was this programmer's preference for pastels that gives *Centipede* its characteristic colors: pinks, greens, violets. The programmer, Donna Bailey, wanted the game to be, as she says, "visually interesting."

The First Game To Have "Official" Spin-Offs

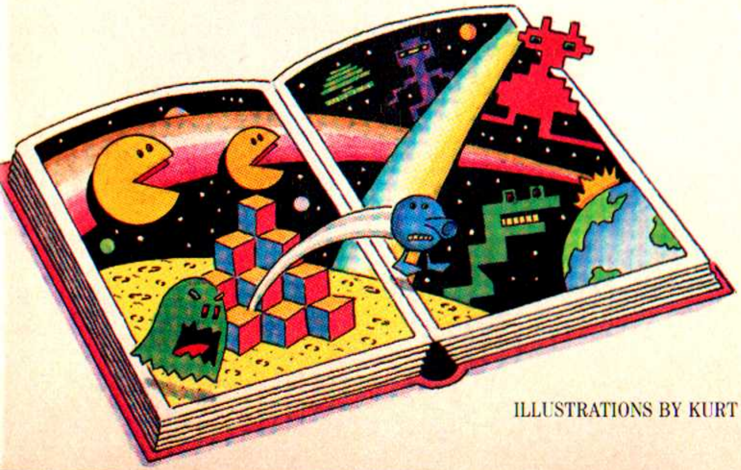
After the great success of **Pong,** Atari produced **Super Pong, Pong Doubles, QuadraPong, Breakout** and **Super Breakout.** An official spin-off is a new game designed by the same company and having some relationship to its predecessor—in name, style or game characters. The most recent spin-off clan is the (Midway) Pac family: *Pac-Man, Ms. Pac-Man, Super Pac-Man, Baby Pac-Man* and *Pac-Man Plus.*

The First Game To Have Recorded A Nine-Digit High Score

Robotron 2084 was scored out to nine digits (that's a hundred million points, to you and me). The score, which, by the way, has been topped, was 100, 525,700. This, indeed, is a lot.

The First Book About Video Games

It had to happen. With the popularity of video games, there had to be guides to playing them better. *How to Master the Video Games,* by Tom Hirschfeld, was the first how-to-win book. The first "complete" guide to video gaming (manners, maladies, dress, etc.) was *Defending the Galaxy,* of course.



The First Gamers To Play While Partially Submerged In Jell-O

Greg Pincus and Scott Johnston, on May 30, 1983 in Providence, RI, played a 28-minute game of **Dig-Dug** while standing in a wading pool filled with lime-flavored Jello brand gelatin. No comment was given as to a purpose for this stunt, although they did hope they were the first to do it.

The First Person To Die Playing A Video Game

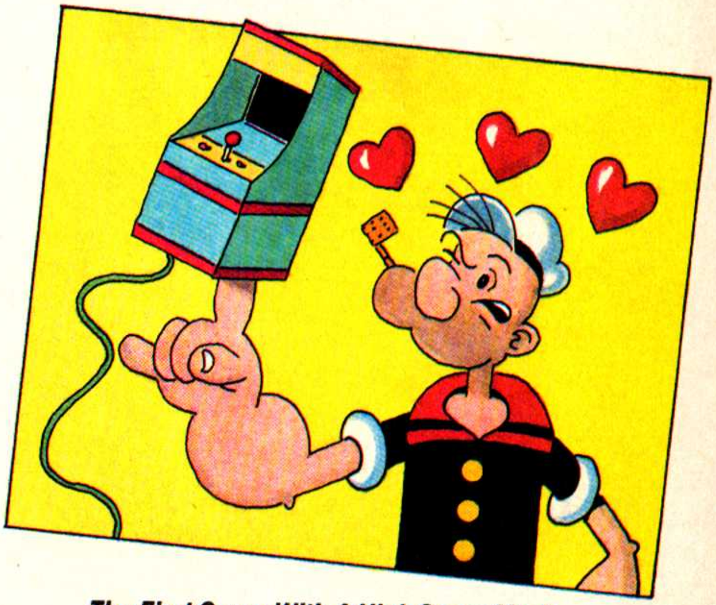
Galactic warrior Peter Bukowski had a heart attack on April 3, 1982, in Calumet City, Illinois—at the Friar Tuck game room, River Oaks Shopping Center. The game he was playing was **Berzerk.**

The First Video Game Made Into A Cartoon

Pac-Man, by Bally/Midway.

The First Cartoon Made Into A Video Game

Popeye, by Nintendo.



The First Game With A High Score Mode

Space Invaders. It remembered the highest score, but it didn't care who made it.

The First Game With An Initial High Score Mode

Asteroids. Part of Asteroids' amazing success was its ability to accept and display the initials of its high scorers. Soon after, most videos followed.

The First Video Game Made Into A Pinball Machine

Pac-Man, by Bally/Midway.

The First Pinball Machine Made Into A Video Game

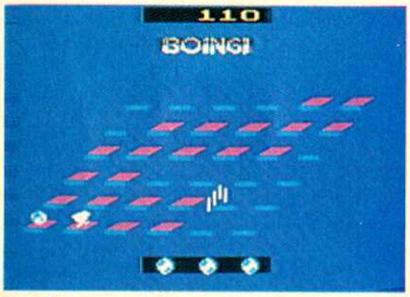
Video Pinball, by Atari.

Michael Rubin is the author of Defending the Galaxy —The Complete Guide To Videogaming.

ILLUSTRATIONS BY KURT VARGO

VIDEO GAME BUYER'S GUIDE

By Raymond Dimetrosky



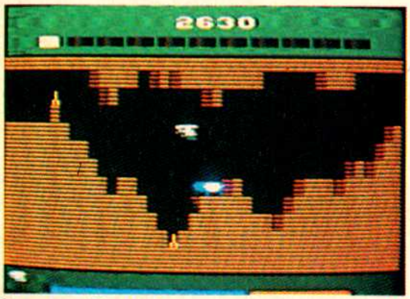
BOING — B

Well, it was inevitable. After *Space Invaders*, we were showered with games sporting marching meanies, and after *Pac-Man* appeared, every contest seemed to feature gobblers who munched dots. So now that *Q*Bert*'s hit, guess what kind of video games are being introduced—games like *Boing*, which require you to jump onto blocks in order to change them all to the same color.

If you like *Q*Bert*, you'll like *Boing*. You're being chased by a soap bubble and a pin, and you can move around to use the pin to burst the bubble. The game *does* suffer from flickering and the graphics and sound are very simple.

But to the game's credit, it is rather addicting, and later rounds offer a substantial challenge. So if you've already mastered *Q*Bert* in the arcades and want to take home something that is similar but a bit faster, give *Boing* a try. It's an interesting spinoff.

First Star, for Atari VCS



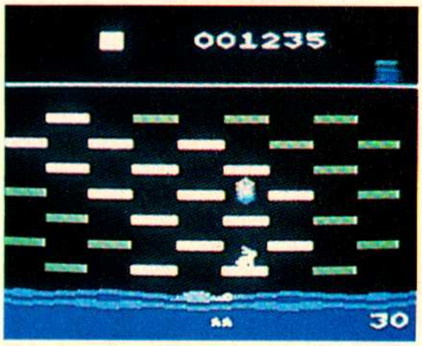
SUPER COBRA — B

You control a helicopter that flies through varied terrain. The enemy is equipped with rockets, falling mines, ground artillery and fireballs. With ten different levels, this is one game that will not be mastered in a few hours.

Super Cobra is like a cross between *Cosmic Avenger* and *Vanguard*. You drop bombs and shoot missiles, like in *Cosmic Avenger*, and after each defeat you can continue the game, as in *Vanguard*.

Another similarity to *Vanguard*: if you complete all ten rounds, you are rewarded with a special contest (in this case, picking up booty). The graphics are pretty good for the VCS and, especially in later rounds, there's plenty of action. One annoying feature is the way you fire. When you press the fire button once, a missile is released. A second press drops a bomb. This makes it almost impossible to react quickly. Still, there are many plusses to *Super Cobra*: you can play at three levels of speed, you have precise control of your craft, and you can pause the action. *Super Cobra* will be enjoyed by lovers of scrolling, shoot-'em-up contests.

Parker Brothers, for Atari VCS

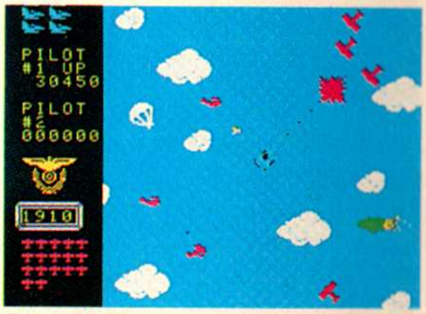


RABBIT TRANSIT — B+

So, you've struggled through hours of *SwordQuest* until all that's left of your brain is marshmallow. You still feel like playing, but you're in the mood for some mindless fun. *Rabbit Transit* is perfect for you. You control a bunny who hops through three screens. In scene one, the Mysterious Meadow, you must avoid obstacles (similar to *Frogger*) and hop onto a turtle. Scene two, the Land of the Ledges, is reminiscent of *Q*Bert*. Each ledge you jump on changes color. When all the ledges have been changed, the intermission, Bunny Bushes, appears. Your rabbit disappears and returns with a new family!

Rabbit Transit will be fun for everyone, but it will be enjoyed most by younger children. The graphics are cartoon-like and you're serenaded with *London Bridge* and *The Bear Climbed Over the Mountain* throughout. Best of all, the early rounds are extremely easy, so children won't become overly frustrated. Lovers of cute games will be especially enchanted by the game. You won't find incredible challenges, but it *is* playful and fun.

Starpath, for Atari VCS

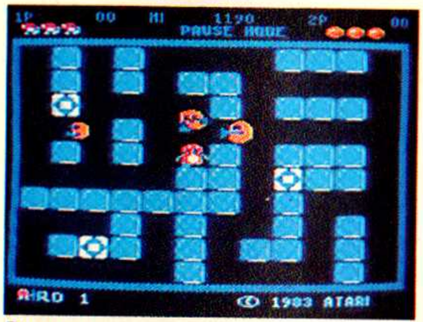


TIME PILOT — B-

At first glance *Time Pilot* looks like any other shoot-'em-up. There are scads of enemy fighters, and you must shoot and destroy them while avoiding their fire. Oh sure, there are parachuters to pick up and larger warplanes to destroy at the end of the round, but for the most part, there's nothing unusual here, right? Well, that's not totally correct. You see, this contest begins with 1910 biplanes, but once you complete the wave, you jump to 1940 bombers. Future rounds take place in 1970 and 1985 with jets and spaceships.

There's no arguing about whether or not *Time Pilot* is fun. You get a real sense of accomplishment when you pass from one time period to another, and later rounds are jam-packed with excitement. Unlike most of Coleco's home games, *Time Pilot* doesn't look nearly as good as the original. The graphics are colorful, but blocky. But come to think of it, *Time Pilot* was never any gem to look at anyway. In this game, it's the play action that is important, and it has been preserved. If you're lucky enough to have a pair of the new Super Action Controllers, try them out on *Time Pilot*. The excitement, as well as your control, is greatly enhanced.

Coleco, for ColecoVision



PENGO

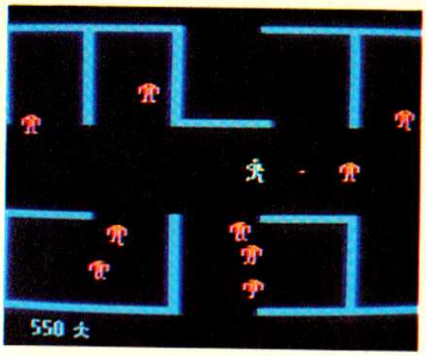
A-

You're a penguin in a room full of ice blocks. Your goal is to break the blocks of ice or slide them into the three Sno-Bees, who are trying to finish *you* off. There are three special unbreakable blocks that, when pushed together, give you the chance to quickly eliminate your opponents.

Peng is a game of strategy rather than a test of your reflexes. It is essential that you plan the best way to crush your enemy, and arrange the blocks in the shortest period of time in order to rack up big points. *Pengo*'s great graphics and enjoyable musical theme add up to produce a real polished arcade look. The playfield is bright and colorful, and the game is fun to watch even when you're not playing.

Best of all, with multiple boards and numerous ways to score points, you won't quickly throw this one on that pile of cartridges that sits on the top of your closet. Fans of the arcade game will not be disappointed.

Atari. for Atari 5200



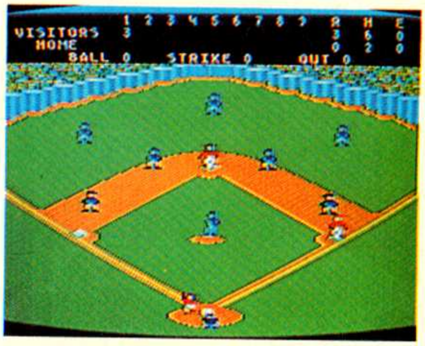
BERZERK

B+

For the few of you who have never seen *Berzerk* in the arcades, the premise is simple. You control a man who is being attacked by rooms full of robots. You must shoot them or cause them to crash into electrically charged walls before they do the same to you.

Not only does the 5200 *Berzerk* have the look and feel of the arcade hit, it also has the same sounds. Like their new baseball game, this Atari game talks. Without any special adapters or clumsy apparatus, the cartridge says, "Fight like a robot," etc. *Berzerk* is also one of the first 5200 games that is easy to control with the 5200 joysticks. Rapid-firing is not essential, so you'll have plenty of time to plan your next move. One of the only drawbacks to *Berzerk* is that it becomes difficult very quickly. Some gamers may have tired of the contest, since it's been years since it was first introduced in the arcades. But if you're still a *Berzerk* fan, rejoice. This game is virtually identical to the arcade original.

Atari, for Atari 5200

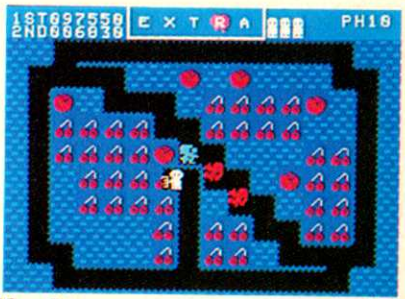


BASEBALL

A

What makes a good game great? Of course it needs superior play action. And good graphics and sound effects are helpful too. But the magical ingredient is to somehow make the contest *unique*. The designers at Atari have managed to make baseball, an ordinary game that has been produced so many times, into something new and unusual. How did they do it? By making it *talk* with *no* speech module! An electronic umpire informs you whether the pitch results in a ball, strike, foul ball, or an out. The crowd cheers when you score, and with a melodic rendition of "Take Me Out to the Ballgame" and frequent bursts of musical encouragement, this is *not* a quiet game. Curiously, *Baseball* is the quietest when you get a hit without scoring. This is a bit of a letdown. But there's enough here to more than make up for any drawback. The field is well-detailed, the players are colorful, and the scoreboard is ideal. You can control all of your fielders, and if you hit the top button on your joystick twice, your fielder will throw to the closest base with a runner. You can play at one of three different skill levels, against a friend, or against the computer. This feature allows beginners and experts to compete. No question about it, *Baseball* is a hit.

Atari, for Atari 5200



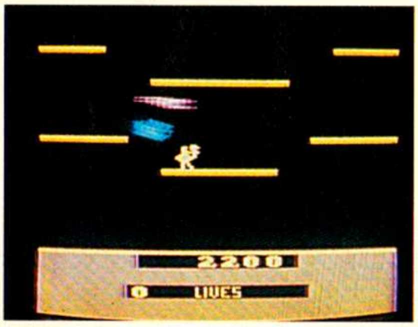
MR. DO

B+

In this game, your goal is to harvest red cherries. As you merrily wander around the orchard, a number of Badguys come after you. To destroy the Badguys you can either shoot them with a power ball or squish them by dropping apples. Once the bad guys have all left their homes, a special prize is revealed. By touching the prize, an Alphamonster from above enters the orchard. If you destroy the Alphamonster then you "capture" a letter from the word "EXTRA." By capturing all of the letters, you win an extra turn.

Mr. Do has all the cuteness and polish of the arcade original. The graphics are great and the musical soundtrack is enjoyable (although after a while the theme becomes monotonous). *Mr. Do* will be enjoyed by younger children, because it is relatively easy to learn. However, the same feature may prove to be a drawback to adults. After a while the game may become a bit dull for arcaders who are used to fast-paced action. But if *Mr. Do* is every bit as good as the original, can you really ask for much more?

Coleco, for ColecoVision



JOUST B+

It is the future. You sit atop a winged creature with your sole weapon, a lance. Soar above the enemy and strike him before he strikes you. Victory, you have destroyed him. But now an egg drops out. Catch it and you're safe, let it hatch and you're in for a fight with an even more deadly opponent.

Atari has done a terrific job in translating *Joust* for the 2600. As in the arcade game, you must work to achieve success. In this version, you must repeatedly press the red button on your joystick to fly. The play action is very similar to that of the arcade original.

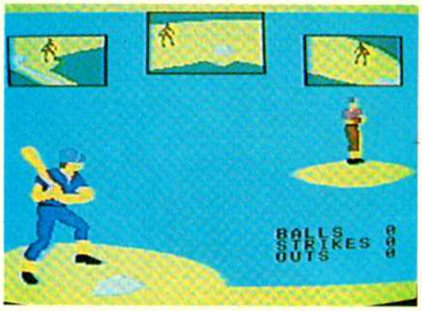
In later rounds when you have to deal with more enemies, the action becomes frantic. Precise control of your man is essential, and fortunately, the Atari joystick gives you just that. It's especially nice, for a change, to be able to eliminate an opponent without firing missiles

At least in *Joust* you're required to do more than just shoot the enemy or run and hide from it. It's great to have a game that's truly different from all the rest. There's even a two-player version in which it's every gamer for himself.

Arcade-to-home game conversions often leave a lot to be desired. (Remember how they butchered poor little *Pac-Man*?) But if you enjoy this arcade classic, you won't be disappointed.

The 5200 version is even better.

Atari, for Atari VCS

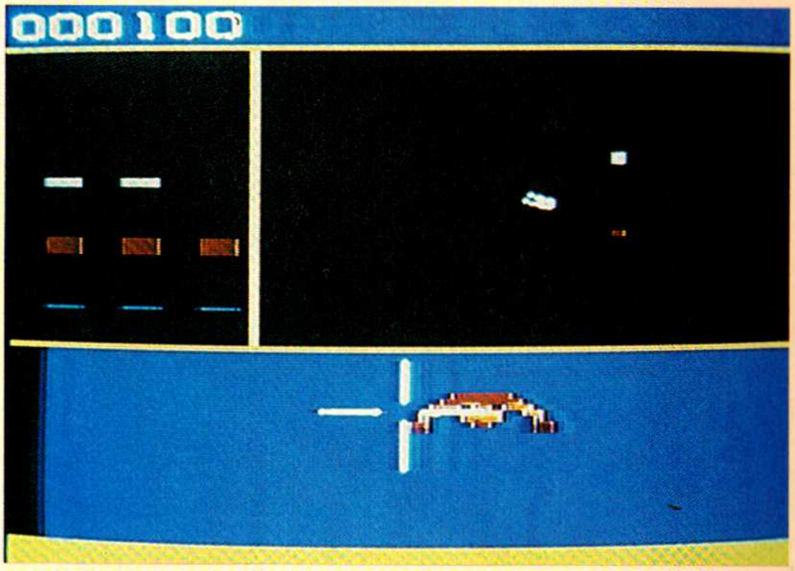


SUPER ACTION BASEBALL A

Super Action Baseball is a superb two-player game. That's the catch—you have to have a friend to play this one. Be that as it may, this game is great. The major reason is the outstanding Super Action controllers. Within one control are four action buttons, a 12 number/symbol keypad, a joystick and a speed roller! When you play SAB you utilize all of the controller's features. The action buttons control pitch selection, runners, and fielders. The keypad determines pitch speed, pick-off attempts and steals. The joystick modifies pitches, moves fielders, and swings the bat. The speed roller controls the movement of the base runners. As you can guess, it is necessary to practice before you can become an expert. Surprisingly though, considering all the options, the players are fairly easy to control.

When play begins you have a close-up

GAME OF THE MONTH



STAR TREK A

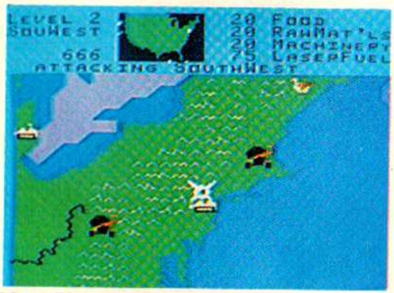
VCS versions of arcade hits seem to take one of two forms: either they're real beauties like *Frogger* or *Ms. Pac-Man*, or they're real bombs like *Pac-Man*. The successes usually contain pretty good graphics and sound effects, but that's not the most critical part. They somehow recreate the *flavor* of the original. *Star Trek* manages to do just that.

As in the arcade game, the screen is divided into three parts. By using this technique, the designers allow you to simultaneously see your gauges (energy, photons, and warp drive), a radar screen, and a close-up view of the action. This is one of the few games that really makes full use of your TV screen. Each sector (level of play) consists of six rounds, and they're not all the same. Not only does the game have the look and the complexity of its arcade cousin, but the play action is virtually identical. This goal is achieved in part by an overlay which you place on the joystick. The result: you can direct all of your attention to the joystick and screen. Sure, even with all these features *Star Trek* is not identical to the arcade game. (There are no voices issuing commands, and the graphics are much simpler.) But who cares? It's just as much fun!

Sega, for Atari VCS

view of the pitcher and batter, with isolated close-ups of first, second and third base. As soon as the ball is hit, your view changes to the entire ballpark. Some people may love this feature, while others may prefer contests like Atari's 5200 *Baseball*, which always shows you the entire field. The sound effects feature the usual cheering (there's also some annoying whistling), while the graphics are outstanding. For the real baseball lover, *Super Action Baseball* is super.

Coleco, for ColecoVision



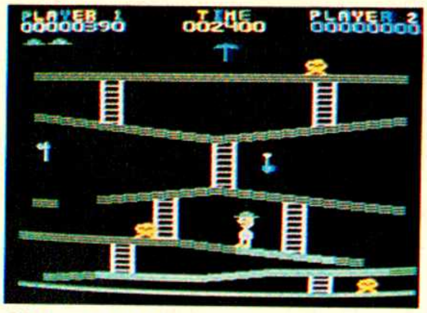
WAR ROOM

A+

If you've seen *Wargames* and you long to challenge Russia to a computer match, *War Room* is for you. This contest is more than a game, it's three games in one. When play begins, the screen is filled with a regional view of the United States, a small map of the entire country which serves as your radar, and printed information detailing supplies of food, raw materials, machinery and laser fuel. A siren sounds and your country is under attack. You slide your hunter satellite on top of the attacking satellite and fire. If they get past you, a U.S. town is destroyed.

If *War Room* stopped here, it would be a good game. But now the strategy comes into play. Many of your cities are designated as centers for food, raw materials, machinery and fuel. It's up to you to make sure these cities can keep producing for the good old U.S.A. So place your hunter satellite over the appropriate city, hit your keypad and determine its status. You may wish to add or remove some of the materials. So you hit another button and you're inside the city. But the Commies are there too. *War Room* is truly a strategy/shoot-'em-up test of your reflexes. It's extraordinary.

Probe 2000, for ColecoVision



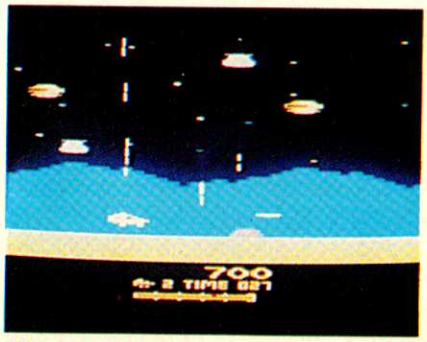
MINER 2049ER

A

You are Bounty Bob, and boy do you have a rough mission ahead. You find yourself in the mines with merciless mutants approaching. Quick, grab one of the miner tools. Now the tables are turned and you can destroy the mutants. But if you don't color in all of the floor before time elapses, it's curtains anyway. So, you think you've done it, eh? Well, don't get too excited. There are ten more levels to go!

Miner 2049er stands out from the swarm of software in two ways: It has more levels of play than virtually all recent releases, and it is the first program to be licensed for just about every system. Many other games have boasted multilevel play, but it quickly becomes apparent that most levels are just slight modifications of their predecessors. Not true for *Miner*. Here, in screen after screen, you meet new and *different* challenges. So while you're always involved in a climbing game, each round is fresh and exciting. The graphics and sound effects are not the best ever created, but who cares? The play action is what's important here. In many ways *Miner* resembles *Donkey Kong*. But don't look for this one in the arcades; it's a completely original program. *Miner 2049er* won't disappoint you.

MicroFun, for ColecoVision

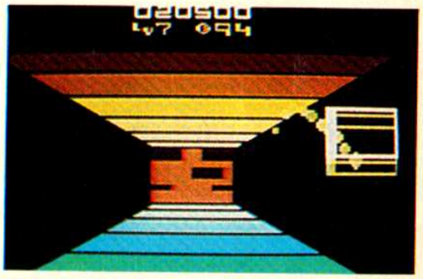


MOON PATROL

B-

Had *Moon Patrol* come out in 1982, it probably would have been heralded as a terrific space shoot-'em-up game. The graphics are good (the game sure is colorful), there are plenty of dangerous obstacles to keep you on your toes, and yes, it *is* addicting. But this is 1984, and the game is a little too simple for these times. Actually, Atari's *Moon Patrol* has the feel of the arcade game, if not the exact look. You wander across the moon's surface, jumping over craters and shooting at anything that gets in your way. A touch of the joystick releases vertical and horizontal missiles, so it's possible to kill two of your enemies with one shot. That's about it, though. So, let's give Atari an A- for a faithful adaptation but a C- for licensing a dull game. That averages out to B-. It all depends on whether or not you're a big fan of the arcade game.

Atari, for Atari VCS



WALL BALL

B+

Here's a three-dimensional ball and paddle game like nothing you've ever seen.

You control your racquet with your joystick (unlike the numerous paddle games). You can begin at any of eight levels of play, so you need not be bored once you master the easy levels. There are a total of 72 bricks, but only 57 must be hit to advance to the next level. After you clear the board three times you begin the "eliminator" round. Now you are given fewer balls and the bricks jump around! *Wall Ball*'s strongest asset is its colorful game board. And if you're a gamer who's into strategy, you'll love the *Wall Ball* instruction booklet. It teaches you how to use the paddle to hit every corner of the screen. One warning —if you don't enjoy games like *Breakout* you may become bored with the repetitive action. But if you're tired of shooting aliens, and you want something a little different, then play a match of *Wall Ball*. Its smashing.

Avalon Hill, for Atari VCS

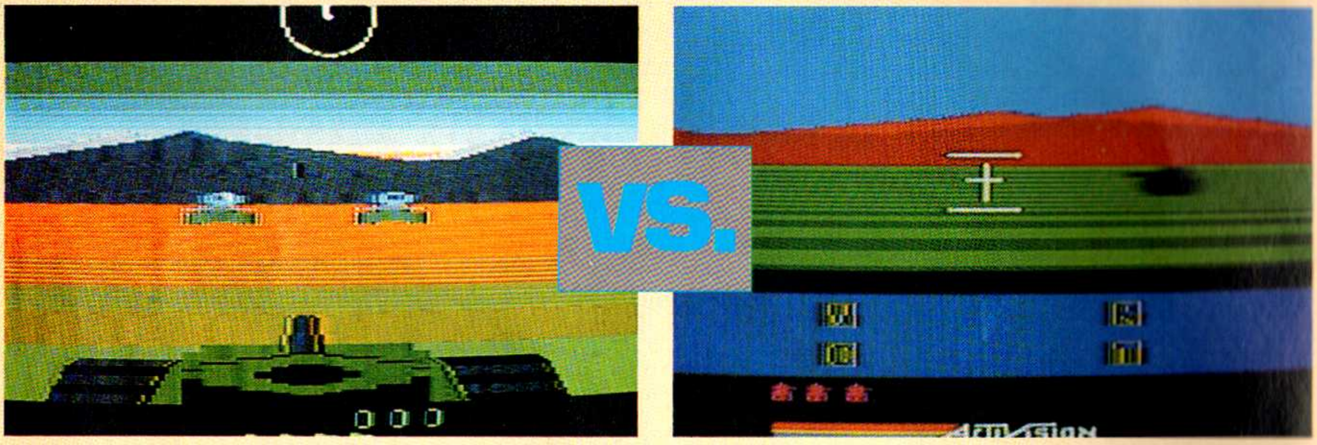
ONE ON ONE

BATTLEZONE

(Atari, for Atari VCS)

ROBOT TANK

(Activision, for Atari VCS)



TO BE HONEST, I'M NOT CRAZY ABOUT *BATTLEZONE* OR *ROBOT TANK*. Why? *Battlezone* was one of my favorite arcade games. *Battlezone* still stands as the best first-person simulation ever designed. But neither home version of the game completely captures that elusive arcade experience.

Both of these carts are similar in premise. Each contest pits you against legion after legion of enemy tanks. The idea behind both games is that you, not some blob on the screen, are the "it" in the game. What you see on the screen is but a small slice of the playfield. For a more complete view, you have to refer to the radar scanner.

Both *Battlezone* and *Robot Tank* feature these handy devices. At a glance they tell you where the enemy is prowling in relation to your position. Once you spot him, the idea is to turn and shoot, right? Well, in *Battlezone*, this is all you *can* do because your tank truly is landlocked—it can only spin in place. Since this is the case, *Battlezone*, unlike it's inspiration, has been reduced to a twitch game requiring little strategy aside from the obvious "fire before they do." *Robot Tank*, on the other hand, gives you mobility in every direction. Here you can play cat and mouse with the enemy. For this reason, *Robot Tank* gets the nod as the more realistic of the two.

For diversity of opposition, *Battlezone* is the hands down winner. In addition to tanks, you'll face cruise missiles, saucers and super tanks, which are faster and more cunning than their standard counterpart. This array is impressive. But my feeling is that Atari should have devoted more attention to the player's tank, even if it meant forsaking an enemy or two.

Robot Tank offers just one foe. Granted, facing off against tank after tank could get boring, even for commanders as capable as Rommel or Patton. Miller has, though, more than made up for this by dividing the battle into night and day encounters. Weather conditions change as well. One moment, all will be clear and sunny. The next, the battleground will be blanketed with snow, rain or fog. Naturally, these conditions affect your vision and maneuverability. My only gripe with these changing conditions is that their effects aren't the same on both player and enemy. While your tank muddles along through snow, for example, the opposition moves just as sprightly as ever.

Graphically, both *Battlezone* and *Robot Tank* are standouts. Of the two, *Battlezone* is the better looking. The "battlezone" is a lush green field bordered on all sides by a mountain range. Unlike *Robot Tank*, you see a portion of your vehicle. This can make the first-person concept a bit easier to fathom for players unaccustomed to it. Atari has also done an admirable job of faking the sensation of movement by programming the tank treads to spin while a turn is being executed. This is an effective illusion, but it cannot cover the game's greatest shortcoming—the fact that you can only spin in place.

In *Robot Tank*, Al Miller has again captured that first-person sensation. It isn't as sharply executed as it was in his last effort, *Starmaster*. Although you can confront the enemy by rolling toward him, the feeling you get is that you are the *hunted*, not the hunter. I also felt Miller was a bit redundant with play principles he pioneered in *Starmaster*. Your tank possesses four vital functions —radar, forward cannon, video feed, and mobility. Like in *Starmaster*, any one of these can be knocked out by enemy fire. Unlike *Starmaster* though, you won't find a repair station in the Mojave Desert.

Maybe I complain too much. You've got two excellent games here. Although Atari gets the credit for designing the original—the classic arcade game—Activision has made a slightly better home version.

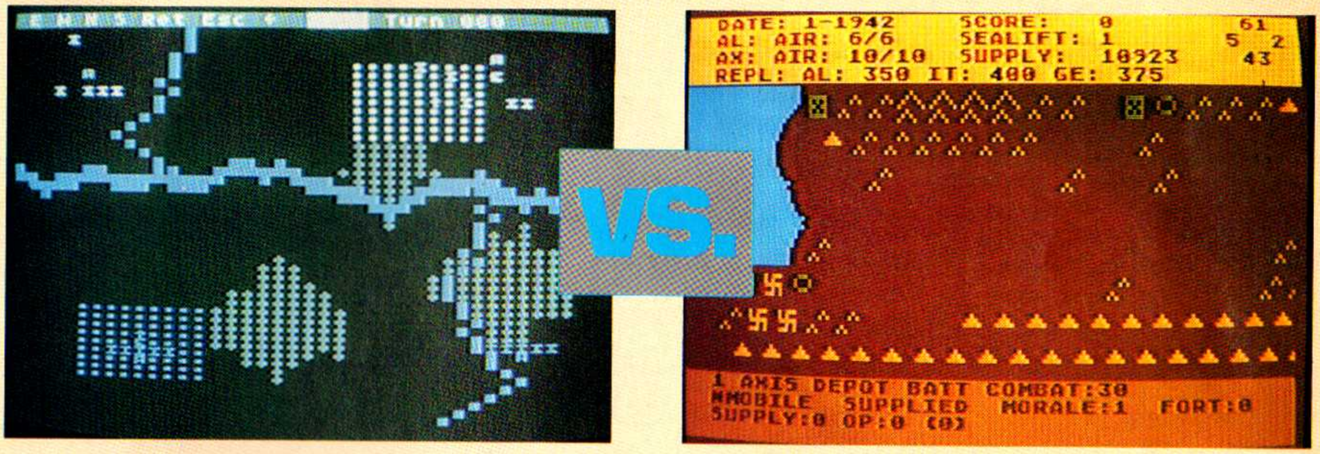
ONE ON ONE

WAR

(Adventure International, for Apple and Atari computers)

KNIGHTS OF THE DESERT

(Strategic Simulations, for Apple and Atari computers)



```
DATE: 1-1942      SCORE:    0          61
AL: AIR: 6/6      SEALIFT: 1          5  2
AX: AIR: 10/10    SUPPLY:   10923      43
REPL: AL: 350 IT: 400 GE: 375
```

```
1 AXIS DEPOT BATT COMBAT:30
NMOBILE  SUPPLIED  MORALE:1  FORT:0
SUPPLY:0 OP:0 (0)
```

THE SUCCESS OF *WARGAMES* SHOWS THAT SIMULATIONS OF WARFARE catch the interest of a lot of people. Real war may be hell, but a fake one on your computer can be fun, and there are plenty of them out there. The simulations discussed here are only superficially similar. One was designed with the novice in mind, the other for the seasoned wargamer.

The simpler of the two, *War,* is for the most part generic as far as strategy simulations go. The battleground doesn't resemble any particular country. The battle isn't fashioned after any skirmish that was actually fought by real men with real weapons. History buffs, understandably, may find *War* too dry and anonymous for their tastes.

The object is to infiltrate enemy territory and destroy all the units of the opposing army. *War* can accommodate two players, each controlling one army that consists of engineer units, infantry units, aircraft and armored units.

The graphics of *War* are symbolic. The playfield shows an overhead view of the battleground. Forests, cities and rivers are denoted by the colors green, white and blue. Each unit is similarly represented. An infantry unit, for example, is depicted by the letter "I," armored units with an "A," and so on.

With each turn in *War,* the player can move all of his units a limited number of spaces in one of four directions. When his alloted moves have been used up, the other player (or the computer in a one-player game) moves all of *his* units. When opposing units occupy adjacent positions, a battle begins. The outcome depends, of course, on which type of units are squaring off. The computer calculates the losses inflicted on each side.

When all of one player's units are destroyed, the victor is given a score calculated according to the following formula: the number of turns taken plus four times the handicap (or minus if the losing side was given an advantage). The lower this figure, the more impressive the victory.

War is a great way for gamers to break into strategy simulations. It's simple to learn and quite absorbing. Certain aspects of the game, though, have been oversimplified, and the documentation is just four pages.

If the length of an instruction booklet is any indication of a game's realism, then *Knights of the Desert* may be the closest thing to real war this side of being there. Historically, this game is watertight. SSI has made these strategy simulations their only line; their devotion to realism and authenticity is certainly evident here.

Knights of the Desert recreates the World War II North African campaign of 1941-42. Players can select certain segments of the full campaign, or play out the entire battle. A full game consists of twelve turns (fewer if a scenario is selected). You can wage war against another player, or command the Nazi forces while the computer moves the British troops in the solitaire version.

The play isn't nearly as simple as a meager twelve turns might suggest. Experienced war-gamers could very well jump right into the action. New recruits must first tackle a 24-page instruction booklet that's chock-full of tables, charts, statistics and a 10-page briefing on the North African campaign as it really happened.

Knights is not a graphic jewel, but the depth and scope of the game's realism more than make up for this. I'm hesitant to say that playing *Knights of the Desert* is fun, because games as involved as this one aren't *everyone's* idea of fun. Rest assured, though that if you buy this one, you'll be playing it for months.

I can't say that one game is better than the other. If you have played strategy simulations, *Knights of the Desert* is as good as anything out there. If not, try *War* first to get your feet wet.

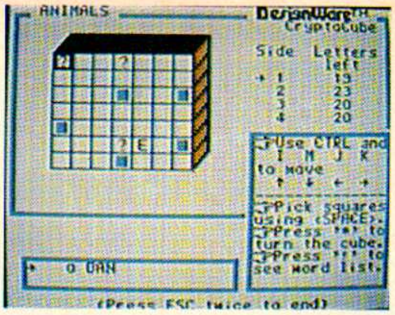
SCHOOL'S OUT!

CONTINUED FROM PAGE 24

supply. There's a map in the right hand corner to let you see the entire board, which is so big it goes outside of the TV screen.

Pipes is like a video puzzle. You have to hook up the houses with a limited amount of pipes. It's also supposed to teach you about economics, since the pipes cost money, and there's a limited supply of that for poor little Arlo. There's no time limit, so you can fool around until you get it right.

The graphics aren't so hot. *Pipes* looks like an Atari 2600 game. The noises are the best part. Every time Arlo moves around, picks up, or connects pipe, there's another crazy noise. This would be the perfect game to annoy your family with. I can see it all now. Plug it in, turn the sound way up, and then, when somebody complains, you say, "But it's an *educational* game! I'm learnin' stuff!" Yuk, yuk.



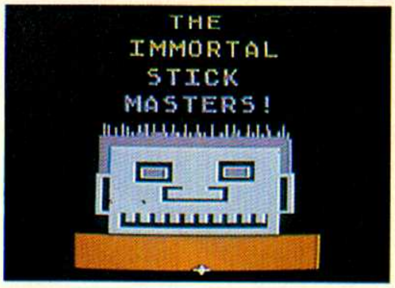
Use CTRL and I M J K to move ↑ ↓ ← →

Pick squares using <SPACE>.

Press * to turn the cube.

Press ? to see word list.

(Press ESC twice to end)



Above: Crypto Cube *is like a Rubic's Cube with words and letters to match up instead of colors; it's not quite as difficult, though. Below: This self-portrait is the kind of colorful computer art that anyone can create via* Fun with Art.

Creative's ads call this a "concept education" game, which makes it kinda different from a lot of educational games. With *Pipes*, you learn about "spatial relationships"—figuring out how to judge distances (and handle money) while attempting to solve the puzzle of hooking up all the houses to the water supply—all without realizing you're actually learning stuff.

That's the best thing about this game. Too many educational games are just animated versions of a teacher's boring lessons. So *Pipes* seems to be a pretty painless, often fun, way to learn, especially for kids from six to fifteen. It's definitely one of the must unusual "play and learn" games I've run across so far.

Crypto Cube by DesignWare is a word puzzle game that was pretty good. A cube filled with 68 squares on each side has words hidden in it. You have to find the words and spell them correctly. You move the joystick around to choose a square. A vowel, question mark, or blue space appears. If it's a blue space, you miss a turn. A "?" means you have to guess which consonant it is. I played it against my friend Fast Eddie (I won, of course) and we had a pretty good time. After we got tired of the word lists they had in the game, we put in our own word lists, which got pretty hilarious. One list was made up of physical deformities (like elephantiasis and pimples) and another was all dirty words. For a spelling game I don't think you could do better than *Crypto Cube*. It's for the Apple.

When I told my teacher that I'm doing these articles for *Computer Games*, she thought it was great. Then she told me it would be better if I told people how well the games work as educational tools. I tried to explain to her that kids don't care how much they learn from a game, they care about how much *fun* it is. She still doesn't get it.

'Til next time, this is Stick Masters, signing off.

Epyx, 1043 Kiel Court, Sunnyvale, California 94806

Muse Software, 347 N. Charles St., Baltimore, Maryland 21201

Creative Software, 230 E. Caribbean Drive, Sunnyvale, California 94086

DesignWare, 185 Berry St., San Francisco, California 94107

NEXT WAVE

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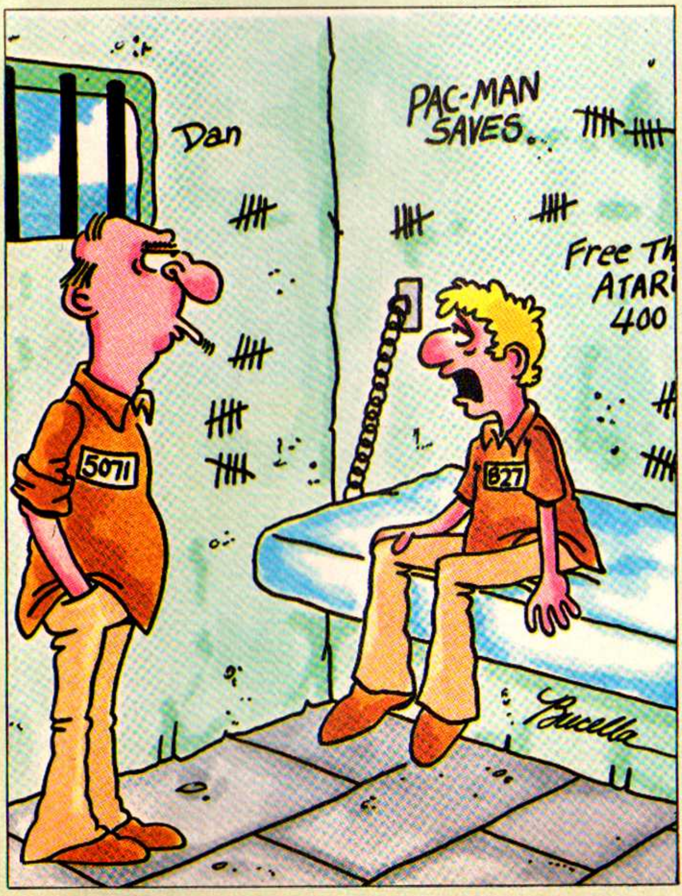

"I was caught with food and drink in Playland."

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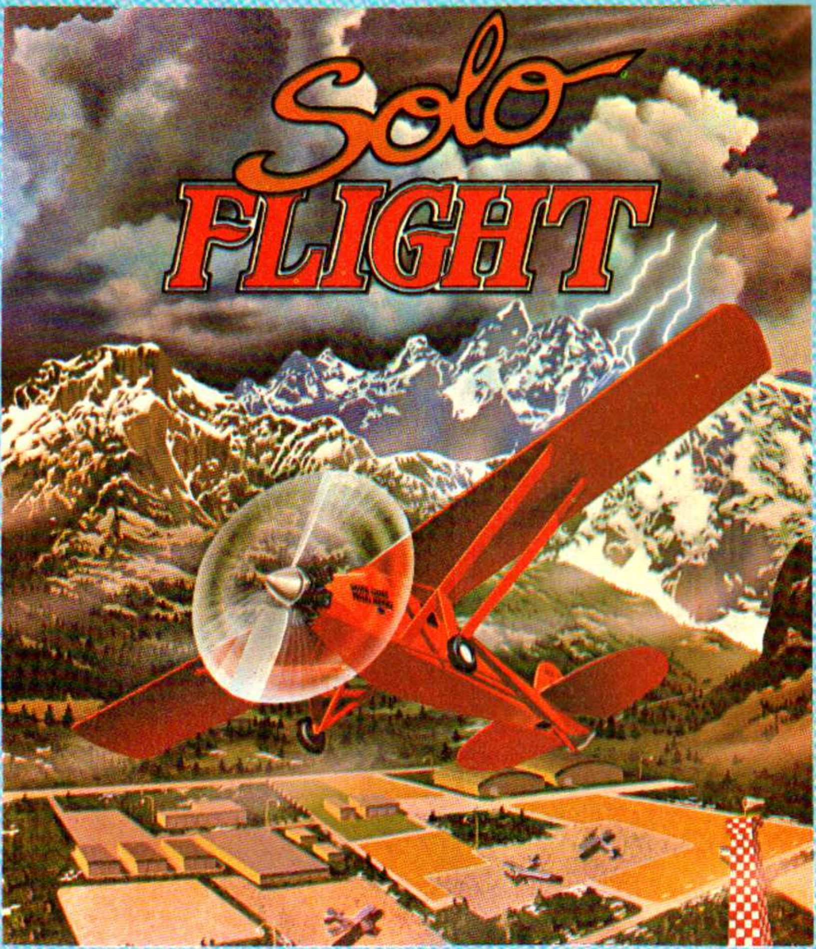
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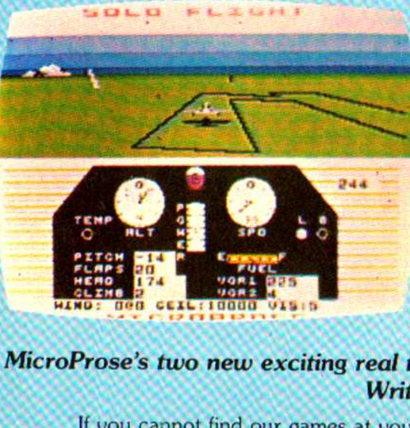
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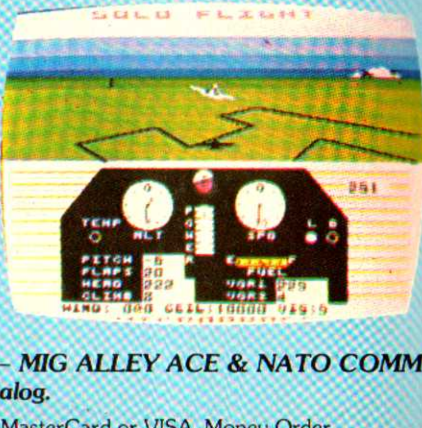
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